

Advertisement Strategy Recommendation Application to Improve Effectiveness in Marketing Targeting College Students

Phase 2: Design
CS 3724: Introduction to Human Computer Interaction
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Record of Changes

Version	Date	Comment	Name
0.1	3/19/23	Added copy of own created personas	Mayali Clary
0.2	3/20/23	Added Namita's persona copy and pasted Activities 4A, 4B, and 4C into the doc	Jillian Ylagan
0.3	3/20/23	Rewrote the title	Clara McDaniel
0.4	3/20/23	Worked on the Introduction	Jillian Ylagan
0.5	3/20/23	Worked on the Storyboards and explanations	Clara McDaniel
0.6	3/20/23	Created a project plan: figured out what needs to be completed and how we as a group want to efficiently get it done by the deadline	Namita Shashidhar
0.7	3/21/23	created wireframes and added in image of wireframes and link	Mayali Clary
0.8	3/21/23	Re-formatted Namita's persona and uploaded image to doc	Mayali Clary
0.9	3/21/23	Worked on the Storyboards and Explanations	Clara McDaniel
0.10	3/21/23	Worked on the Introduction	Jillian Ylagan

0.11	3/22/23	Found a meta-review that relates to our idea. Wrote a brief explanation as to why it does (need to edit this)	Namita Shashidhar
0.12	3/22/23	Started understanding what needs to be done for the Conceptual Design section	Namita Shashidhar
0.13	3/22/23	Wrote another claim with upsides/ downsides, brainstormed ideas, added to introduction	Jillian Ylagan
0.14	3/22/23	Started drawing the second storyboard	Clara McDaniel
0.15	3/22/23	Listed different ideas for the Methods	Jillian Ylagan
0.16	3/22/23	Inserted second storyboard and captions.	Clara McDaniel
0.17	3/22/23	Created sketch representation and uploaded image + link	Mayali Clary
0.18	3/22/23	Conceptual Design - mental model, interaction perspective	Jillian Ylagan
0.19	3/22/23	Inserted third storyboard and captions.	Clara McDaniel
0.20	3/22/23	Added emotional conceptual sketch	Clara McDaniel
0.21	3/22/23	Worked on the methods section	Jillian Ylagan

0.22	3/23/23	Created and uploaded new persona	Mayali Clary
0.23	3/23/23	Wrote persona explanations	Mayali Clary
0.24	3/23/23	Finalized the meta-review found previously and wrote more about how certain concepts discussed relate to the idea being analyzed	Namita Shashidhar
0.25	3/23/23	Read over the introduction section to see if there were any modifications I should make (will come back to, but felt that there was not much to change)	Namita Shashidhar
0.26	3/23/23	Worked on the introduction and the methods sections	Jillian Ylagan
0.27	3/23/23	Worked on ideation.	Clara McDaniel
0.28	3/24/23	Uploaded ecological conceptual sketch	Clara McDaniel
0.29	3/24/23	Added ideas to ideation section	Mayali Clary
0.30	3/24/23	Added metaphors and updated the appendix section	Namita Shashidhar
0.31	3/24/23	Added descriptions for conceptual sketches.	Clara McDaniel
0.32	3/24/23	Worked on the claims	Jillian Ylagan

0.33	3/24/23	Updated introduction / read through it and changed some wording	Namita Shashidhar
0.34	3/24/23	Added more to the sketch explanations	Jillian Ylagan
0.35	3/24/23	Created more sketch representations + added links for better viewing	Mayali Clary
0.36	3/25/23	Finished up the Storyboard section.	Clara McDaniel
0.37	3/26/2023	Worked on the claims, explanations for the ideation sketches, and finished ideas	Jillian Ylagan
0.38	3/26/23	Restructured wireframe and added all images to the appendices.	Clara McDaniel
0.39	3/26/23	Created written persona profiles.	Mayali Clary
0.40	3/26/23	Read through the report and made some final touches	Namita Shashidhar
0.41	3/26/23	Added past screenshot of wireframe creation to appendix	Mayali Clary
0.42	3/26/23	Finished the ideation explanation and the claims	Jillian Ylagan
0.43	3/26/23	Did a final read through and edited	Clara McDaniel
0.44	3/26/23	Did a final read through and edited	Jillian Ylagan

0.45	3/26/23	Did a final read through and edited	Mayali Clary
0.46	3/26/23	Did a final read through and edited	Namita Shashidhar

Introduction

The team is creating an advertisement strategy application for marketing towards college students on TikTok, a short-form video creation platform that many teenagers use for entertainment. The purpose of the application is to improve the effectiveness of the advertisements on TikTok.

The team's general approach to the project design comes from JM Caroll's definition of human-computer interaction. His definition included four different parts: cognitive, cultural, aesthetic, and social. For cognitive, the team wants to inform marketers on how to influence individuals that are part of a target audience. For culture, the team wants to target a younger culture of college students that primarily use TikTok as their source of entertainment, whose trends and practices often differ from that of the marketer. For aesthetics, the team's goal is to make the application aesthetically pleasing and easy to view. Finally, for cognitive, the team wants to inform marketers on how to influence individuals that are part of a target audience.

According to a paper written by Harrison, Tatar, and Sengers, there are three different design paradigms. They relate to three different subtopics: engineering, human information processing, and phenomen. These three paradigms are further described in the textbook "The UX Book: Process and Guidelines for Ensuring a Quality User Experience" by Hartson and Pyla are described below (Harrison 2007).

The first paradigm is about HCI engineering, which focuses on helping the user have the best performance possible while using the application. This means that when the user is attempting to complete a work task while using the application, they can do so in the best possible way because of the application design. The designer is also required to create the best application with the resources that are available. The goal while using this paradigm during the design phase is to see what the user can accomplish, as well as to make that process more efficient.

The second paradigm is about human information processing, which describes the relationship between the human mind and the computer. The paradigm focuses on analyzing what the brain can comprehend and then designing around those concepts. For example, since humans have limited short-term memory, a designer will only put three or four pieces of information on a given page so the human mind can understand it all.

The third and final paradigm is about "design-thinking", which focuses on the user's experience with an application. The main aspects taken into account when using this paradigm are the emotional, social, and cultural perspectives. This paradigm emphasizes that when creating an application, it is important to keep in mind the user has emotions and feels a certain way while using the application. There are also going to be different levels of satisfaction depending on the person using the application and which part they are using. When designing using the third

paradigm, it is important to keep in mind how the user is going to feel while using the application (Hartson 2018).

Using the given information about the design-thinking philosophy, the team wants to focus on many aspects of HCI. It was stated in the textbook that it is important to think about the emotions the user experiences and their level of satisfaction while interacting with the application, and that is the approach that the team has been using while designing.

The rest of the Phase 2 report contains sections on what the team worked on for the design portion of the project. The Methods section describes the procedure the team used to approach the assignment and create the design. The section also outlines how the team split up the work equally and made decisions as a group. In addition, there is also information about how ideas were created, as well as how storyboards and wireframes were created. The Personas section includes four different descriptions of potential stakeholders that can be applied to the advertisement strategy application. The personas that are described are workers in business advertising, fashion marketing, a marketing intern, a college-aged TikTok user. The Ideation and Critique section contains 100 ideas that were produced about the potential design of the final application. There are also sketches in that section that describe the evolution of ideas in a physical sense. The Conceptual Design section includes the designer's mental model, mapping, outline techniques, and the sketches of features of our design. The Storyboards Section includes the team's three storyboards, where each one relates to either ecological, emotional, or interactive perspectives. The Claims section has three claims that are fully-developed with at least five upsides and downsides. The Wireframes section includes a wireframe with 17 states of the advertisement strategy application. The References section contains the sources that the team used while researching for the project. The Acknowledgement section includes all names in the team, and it shows that the team acknowledges that no form of cheating took place while completing the design phase of the project.

There are also appendices provided that supply assisting materials. Appendix A displays material from Phase 1 that was used in constructing Phase 2. The remaining appendices, Appendix B, Appendix C, Appendix D, Appendix E, and Appendix F, display large-scale versions of the images used in Personas, Ideation and Critique, Conceptual Design, Storyboards, and Wireframes respectively. There are also links provided throughout the report which provide an option to zoom in and out on the images if desired.

Methods

First, the team had many brainstorming sessions where about one hundred design ideas were created, resulting in the final design for the application. The first session took place during the class period when Activity 4A was completed. The other sessions took place during the team's team meetings. After each brainstorming session, the team also held critique sessions on the ideas that were gathered, and the final session is where the team arrived at the key decision of creating an advertisement strategy application.

Next, the team discussed the strengths and weaknesses within the group and decided that those who are better at the creative aspects of the project took the lead in designing the storyboards and wireframes. Two members of the team did so, and the other two worked on the writing components. The team also had many team meetings on Monday and Wednesday to talk about the decisions that needed communal agreement. Some examples of this are what needed to be included in the storyboards and wireframes, as well as the upsides and downsides in the claims. On Friday, the team had a meeting to discuss what needed to be added to the report based on the rubric, assignment page, and instructions.

Finally, in the subsequent week of the design phase, the team constructed storyboards and wireframes to finalize the design. On Sunday, the team had a team meeting and that is where the final readthrough and last edits took place before submitting the final report.

Personas

Main persona: Jane Doe

Jane Doe is an incredibly busy woman. She is 48 years old and works in business advertising. Unfortunately, she doesn't have much free time as she spends most of her day working. She has an extremely busy schedule, but a strong work ethic. However, she is a bit out of touch with what college students enjoy, as she's much older than her target audience. The business she works for wants to reach younger generations in order to maintain the longevity of their business's name, so her boss puts her in charge of creating advertisements on social media to reach their new wanted audience. A colleague suggests to Jane that TikTok is one of the top social media apps at the moment and that their algorithm makes it significantly easier to advertise and gain views. Jane has never used the application before and has no idea what is trending on the app.

Jane Doe was picked as the main persona as she is the perfect candidate for someone who uses our advertising strategy recommendation app. Our app is meant for users who are unaware of current trends and need an explanation of how to make TikTok videos based around new trends, alongside examples. Additionally, the main audience our app would target would be busy advertisers who don't know or understand TikTok very well, but want to reach college aged people in the most efficient way.

Ways our app would benefit Jane:

- Spend less time on projects but cutting out research time
- Gain insight on statistics of that videos receive the most views/likes on the app
- Gain insight on new trends that appeal to college students
- Explanation of trends that target older audiences who have never seen/heard of certain trends.
- Way to interact with influencers who will help create videos

Ways Jane may struggle with our app:

- May not understand how to go about video creation process on actual app after viewing trends for inspiration
- Due to a budget, some influencers may not be usable as some may charge a higher premium for their service

Secondary Persona: Christina

Christina is a 28 year old fashion marketer whose company targets college students. Although Christina is not much older than her target audience, she is a bit behind on internet trends; she understands a few as she's seen some TikTok videos before. However, she knows that TikTok is one of the best ways to reach college students. Her boss has tasked her with the creation of their tiktok marketing campaign, including video creation. However, her boss is extremely strict about deadlines and scheduling; this leaves Christina with a very short amount of time to research trends, video making, and editing.

Christina's profile was created because she understands very little about TikTok trends. Additionally, she works in the marketing industry and is tasked with video creation to reach college students. Christina's profile fits a subsect of targeted audience for our application as she has very little time to research trends, topics, and audio clips that are currently trending on TikTok and other social media.

How our application would benefit Christina:

- Spend less time on projects by cutting out research time
- Gain insight on statistics of videos that receive the most views/likes on the app
- Gain insight on new trends that appeal to college students
- Explanation of trends that target older audiences who have never seen/heard of certain trends.
- Way to interact with influencers who will help create videos, become fashion ambassadors for her brand, etc.
- Spend less time creating videos, as influencers are willing to create videos for her.

Ways Christina may struggle with our app:

- May not understand how to go about video creation process on actual application after viewing trends for inspiration
- Due to a budget, some influencers may not be usable as some may charge a higher premium for their service.
- May struggle to find niche trends for specific fashion styles

Secondary persona: Mark

Mark is a 20 year old college student who recently started a marketing internship at Dell. He's extremely excited, but nervous about his new position. He really wants to make a good impression on the company, as he hopes to work for them after graduation. Dell recently released a new product and they are looking towards the new interns for ideas on how to reach college students; their new product would help students take notes quickly, while still looking aesthetically pleasing. Mark is a typical TikTok user and understands a decent amount of trends on the app. However, he recognizes that his "for you page", TikTok's recommended video tab for each user, may only be geared towards trends that he enjoys; he feels that he is unaware of trends across different subsections and user interests across the app. He wants to do further research on what the top videos are across different trend genres in order to reach the most users while using the least amount of time to get the project to his higher-ups.

Mark is a beneficial persona because he is a TikTok user. However, there are so many trends cycling around Tik Tok he is unsure of what kind of videos are the most popular; he also is unaware of different trends across different subsections or genres of videos. Additionally, he works in the marketing industry for which our app would be the most beneficial..

How our app would benefit Mark:

- Spend less time on projects by cutting out research time
- Gain insight on statistics of that videos receive the most views/likes on the app
- Gain insight on specific genre's trends and most viewed videos.
- Gain insight on new trends that appeal to college students
- Explanation of trends for someone who has never seen or heard of them.
- Using the trend explanations, he can explain videos to his boss when presenting ideas
- May refresh his memory on current trends he has already seen.

Ways Mark may struggle with our app:

• He may find the "connect with an influencer" tab to not be useful for his situation

Secondary persona: Lucy

Lucy is a 19 year old college student. She is the typical, everyday TikTok user; in fact, her most used application on her phone is TikTok. She spends a lot of time on the app, but finds herself in a loop of watching the same advertisement over and over again. She feels that most advertisements she watches feel too much like commercials as they are not trendy or interesting to her. She does not have a large amount of money to spend on herself, but she wants to stay up to date with the latest trends and trending products. If she feels that something piqued her interest enough, she is willing to spend money. Additionally, most of what she buys online are products recommended to her by influencers she enjoys or a few advertisements she stumbles upon on social media.

Lucy's persona was created to represent the everyday user within the target age-range. She is the target audience for marketers using our application. She is a college student that spends a good amount of time online and likes the idea of seeing influencers that she enjoys recommending products, as she trusts their opinions. Additionally, she is a great target for marketers as she wants to be able to buy products she finds online and deems trending.

How our app would benefit Lucy:

- Spend less time looking at advertisement videos that she does not enjoy
- Feels like she isn't watching commercials when she wants to decompress and enjoy herself on social media
- Enjoying each video she comes across

Ways Lucy may indirectly struggle with our app:

• She may dislike seeing influencers she likes posting too many advertisements

Ideation and Critique

Ideas:

- 1. Wouldn't it be great if marketers could see trends easily? It would solve their confusion with college students and their preferences.
- 2. It would be great if there was a system that listed out possible influencers that marketers could look at to connect with the correct audience.
- 3. It would be awesome if content creators could easily analyze who is watching their videos.
- 4. I wonder if there was an application that allowed users to negotiate prices for endorsements with influencers.
- 5. I want to understand what TikTok users and my target audience would be interested in watching for advertisements.
- 6. Is there an easy way to calculate how much money is spent on influencers?
- 7. It would be so awesome if companies could create subtle ads that were an enjoyable experience for the audience.
- 8. I think that marketers need to be able to have cost-efficient opportunities and not waste money on finding ideas.
- 9. It seems that business owners need more insight into what audience they are reaching, so it would be nice to have complex data available.
- 10. I wonder if there is an application, which can rank trends based on their popularity on a day to day basis.
- 11. It would be good for college students to only see ads that they are interested in because then they would be able to efficiently buy products.
- 12. I think that business owners would want someone who can focus on marketing their videos.
- 13. I need an application that will use a lot of user information to understand how a content creator should market.
- 14. It would be great if advertisers could know exactly what gets college students' attention.
- 15. It would be great if the advertisers would pay attention to their ad volume, because I encounter a lot of ads that have extremely high volume, making it inconvenient to lower the volume immediately.
- 16. It would be great if TikTok showed me many videos that I'm interested in because I often exit the app if I encounter numerous uninteresting videos in a row.
- 17. It would be cool if the advertisers made fast-paced ads because I don't like slow-paced ads.
- 18. I wish that TikTok showed more viewer data because I am unsure of how much TikTok increases my viewer numbers on my Youtube Channel.

- 19. I want to be able to connect with influencers easily.
- 20. I want to see more cute advertisements because I like them.
- 21. It would be a good idea if companies could be able to efficiently learn how to use TikTok and its algorithm.
- 22. Wouldn't it be awesome if marketers were given explanations of the trends that are shown on the application? Then they would have an easier time understanding how they work.
- 23. It would be cool if there was a scroll function so that the user can easily access multiple parts of the application.
- 24. It would be great if there were multiple buttons through the application to make it easier to use
- 25. It would be awesome if advertisers could only show their ads to people who are interested in them.
- 26. I need a way to get data about the different target audiences that I could advertise to.
- 27. It would be nice if marketers were provided a template for trends.
- 28. An application that would allow easy communication between marketers would be beneficial.
- 29. Wouldn't it be great if the user had a seamless interaction with the application?
- 30. It would be nice if the user's satisfaction level was high at all times while using the application.
- 31. I would like to understand how to apply the trend that I am given to my own product.
- 32. Wouldn't it be cool if I could see all of the information on one page?
- 33. I think it would be awesome if I were given examples of advertisements that I could use.
- 34. It would be cool if I could see the number of likes, comments, and views that I get on average for my advertisements.
- 35. If I am a marketer, I want to see potential business owners who are looking for people to market for their business.
- 36. It would be nice to have an application that allows a marketer to talk directly to the consumer more easily.
- 37. I need an application, which gives me tips / advice on how I could improve my advertisements.
- 38. I want people to feel compelled to purchase my product after they view my advertisement.
- 39. It would be so nice to have an analyzing application that is easy to understand.
- 40. The application should find a way to collect data but display it without too many words and look pleasing to the user.
- 41. I would like the data provided by the application to not be very complicated and I can interpret easily without any experience in data.
- 42. If I am viewing an advertisement on TikTok, I do not want these advertisements to be displayed one after the other.
- 43. If I am using TikTok, the advertisements displayed should not be very long and be boring.

- 44. I would love to find a way to see how many people are viewing the advertisements my company has created.
- 45. It would be great if there was an application that facilitated a marketer's job and did not overcomplicate it.
- 46. It would be interesting if there was an application that took the data and created a PDF or compiled the data in a presentable mode.
- 47. It would be awesome if the basic data on the advertisement could be clicked on to show even more specific information.
- 48. I wonder if there is an application that exists which can give critiques on how to improve ads.
- 49. As a marketer, I would love it if an application can tell me which age range my advertisement is currently targeting.
- 50. As a user of Tik Tok, I would love to learn more about products but without spending too much of my free time when I want to just watch videos
- 51. It would be nice to have a forum for marketers to discuss trending topics.
- 52. A program that collects the success of previous ads and uses it to create a better one would be nice.
- 53. It would help to have data on what people enjoy in my geographical area, so that my ads attract their attention.
- 54. It would be cool if I knew a ranking of influencers to see who is best to work with.
- 55. A system that provides a daily newsletter about recent changes in the TikTok algorithm would be nice.
- 56. I want data on TikTok videos that makes people tend to spend more money.
- 57. I want information on how to make ads more subtle.
- 58. An app that has a filtering system for trends that are relevant to the product being advertised.
- 59. It would be effective if there was an easy -to -use application that would explain difficult algorithm concepts.
- 60. It would be nice to know the impact of cute animals on buyers.
- 61. It would be nice to communicate with potential buyers of my product.
- 62. A communication tool for marketers and influencers would be awesome.
- 63. It would be nice to know the impact of aesthetics on the effectiveness of the advertisement.
- 64. It would be nice to have a tool to record how effective the trends I'm seeing are on advertisements.
- 65. An app that marketers can use to separate trends that are useful for them and aren't.
- 66. An app that shows marketers what the new trends are for a younger generation separate from the marketer.
- 67. It would be awesome if marketers could have more detailed information that would predict the success of their advertisement.
- 68. It would make a marketer's job more efficient if they did not have to research current trends, so an app that updated them on those trends would give them more time to make the advertisement.

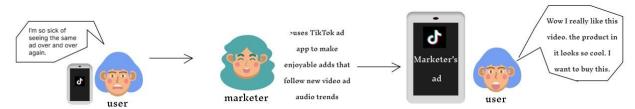
- 69. It would help advertisers understand what videos make buyers want to spend their money.
- 70. It helps advertisers/marketers understand what trends are popular in short video formatwhich is one the top ways to reach out to college students
- 71. The app would help both advertisers and influencers gain business and in effect, income.
- 72. The app allows the older generation to understand TikTok trends as well.
- 73. A system that is able to process data from TikTok to show the most relevant trends and popular audio clips.
- 74. I need an app that would help me track how well my videos are doing overall and which one is doing the best.
- 75. As a marketer, I want to be able to make my target audience persuaded to buy my product.
- 76. I want business owners to be able to find me if I am in need of a business to market for.
- 77. It would be helpful if I were given possible target audiences based on the product that I'm marketing.
- 78. Wouldn't it be cool if TikTok users could vote on the most popular trends? It would allow trends to be more accurate and up-to-date.
- 79. It would be great if marketers could see the location of users that were close by.
- 80. As a TikTok user, I want to be happy while watching advertisements.
- 81. Wouldn't it be cool if TikTok showed advertisements based on new products that they think we would be interested in?
- 82. When I watch advertisements, I don't want to have any negative feelings, like being sad or uncomfortable.
- 83. As a business owner, I would like an application that fits within my work tasks, like analyzing data on what makes my target audience want to purchase my products.
- 84. I would like an application that is easy to use and does not require too much technical knowledge to understand.
- 85. Wouldn't it be cool to have dropdown menus that the user can interact with to see more information? It would allow users to know that there is more to see on the application and it can all be on the same page.
- 86. I would like a way to survey TikTok users so that I can understand what they want to see in my advertisements.
- 87. I would like an application that is not too complicated or complex to understand.
- 88. As an influencer, I would like to see business owners in my area so that I know who needs help marketing their business.
- 89. I would like to get notifications about how my advertisements are performing on TikTok.
- 90. I want to know how many TikTok influencers are in my area so that I can meet with them in person to discuss business opportunities.
- 91. It would be great if the application did not run in the background so that it did not take up too much of my cell phone battery.
- 92. It would be awesome if I knew which influencers were the most responsive in the application so that I don't waste my time messaging ones who don't respond.

- 93. It would be nice if all of the main parts of the application were highlighted so that I knew what were the most important parts of the application.
- 94. I want an application that I can use in less than 20 minutes.
- 95. It would be great if I were given many different ideas on how to advertise my product.
- 96. I would love to see trends that are specific to my target audiences, but also trends that relate to my product. I would like them to be labeled in sections so that I understand which trend is for which category.
- 97. It would be cool if the application were adapted for people who can not see very well, where the fonts are bigger and in bold.
- 98. I would like to connect my TikTok account to the application so that it is easier to view statistics on my advertisements.
- 99. I want to know the availability schedule of influencers so that I know who is ready to start working with me now.
- 100. It would be cool if the application showed me videos of trending advertisements so I could get an idea of what works when marketing.

The three main design perspectives are ecological, interactive, and emotional. The team strongly considered these perspectives while coming up with the list of ideas. The ecological ideas were about how the application fit within the system of marketers, influencers, and TikTok users. The ideas showed how the application could benefit all of the stakeholders. This perspective was used in many ideas, including 1, 2, 5, 35, and 83. The interactive ideas were about how the marketer uses the application. This included how the user is able to view the ranking of trends, learn how to market more effectively by reading and watching video explanations, and communicate with influencers easily. In addition, these ideas displayed how the application is very easy to use and navigate through. A few of the ideas where this design perspective was used includes 10, 13, 18, 28, 49, 68, and 84. The final design perspective was the emotional perspective. These ideas included the user's preferences in the types of advertisements that they would like to view, and how they would like to feel while watching advertisements. This information was shown in ideas 17, 24, 80 and 82.

Initial Sketches of Ideas

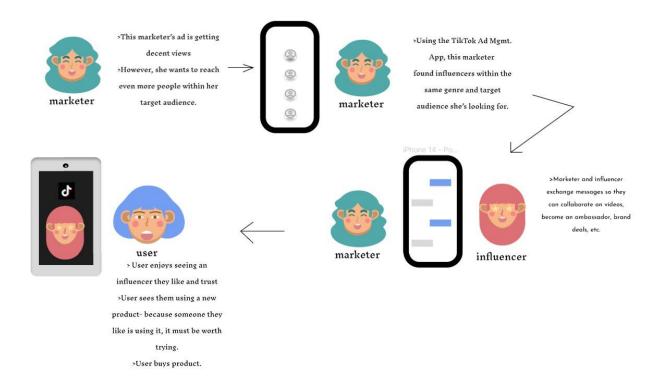
In this sketch, the team is using ideas 6, 10, 13, 14, 15, 16, and 19 to solve the issue of making it more entertaining to view advertisements for the TikTok users.



To better view the image go to this link (click sketch 2):

https://www.figma.com/file/Rv7JoAbAPIAe1gNpafBs6n/Sketch-Rep?node-id=0%3A1&t=FOsAdinOFcSGxm34-1

In this sketch, the team is using ideas 2, 4, 5, and 18 to solve the issue of allowing marketers to connect with influencers easily.



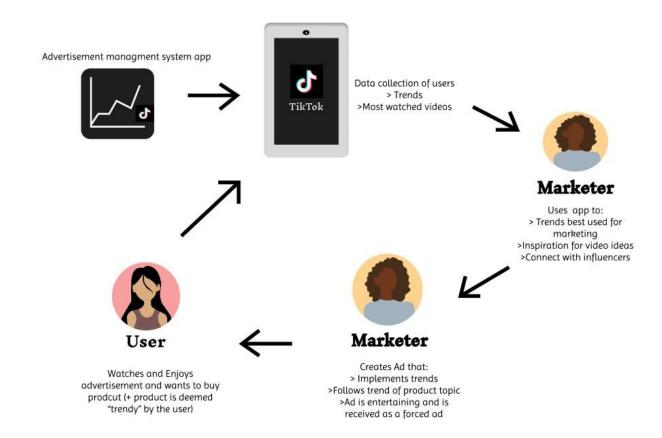
To better view the image go to this link (click sketch 3):

https://www.figma.com/file/Rv7JoAbAPIAe1gNpafBs6n/Sketch-Rep?node-id=0%3A1&t=FOsAd inOFcSGxm34-1

Final Idea: The advertisement strategy application gives an explanation on specific trends that are related to the product and target audience, allows for easy communication to influencers, and has a user interface that is easy to navigate through.

In this sketch, the team is using ideas 1, 2, 3, 7, 19, 24, and 80 in order to solve the issue of marketers being able to find trends easily, see data on their advertisements, and produce entertaining videos for their target audience. This sketch shows a combination of the issues that were identified in the team's previous sketches.

Sketch Representation:



To better view the image go to this link (Click sketch 1): https://www.figma.com/file/Rv7JoAbAPIAe1gNpafBs6n/Sketch-Rep?node-id=0%3A1&t=FOsAd

inOFcSGxm34-1

Describing the Idea:

In a recent meta-review, *The Influence of Advertising in Tiktok Social Media and Beauty Product Image on Consumer Purchase Decisions*, Metta Darmatama and Rezi Erdiansyah conducted research on the social media application, Tik Tok, and deemed through testing and

results that the application certainly has an impact on consumer purchasing decisions. These researchers focused primarily on the effect of beauty product advertisements on TikTok, and the study performed showed that people on TikTok pay a large amount of attention to advertising content when watching videos. Their theory is very similar to the current design being developed as the study states that "the audience affected by online advertisements on TikTok social media will be processed in their minds, which are then responded well in the form of changes in buying behavior" (Darmatama 2021). The advertisement application being developed builds upon this idea as it focuses on how marketers can benefit from using Tik Tok and can advise companies on how to market more successfully and efficiently. Additionally, this study is related to the primary concept being built upon in the current design. This is due to the fact that the study states that Tik Tok is an effective way to advertise products to the general public, especially to a young adult audience. This is beneficial since the current target audience, college students, fall into this demographic. Thus, this meta review endorses the fact that the idea for the system being developed would be beneficial for the marketing work domain (Darmatama 2021).

The advertisement strategy system will provide data on recent trends on the short-form video sharing application, TikTok, that have displayed popularity amongst college-age students. This service includes comprehensive information on these trends as well as the capability to recommend certain trends depending on the product being advertised. Influencers who are most likely to work with the corporation are also recommended, increasing the number of views. This system will benefit corporations or small businesses by increasing their audience and buyers within the age-group of young adults, without having to construct personal opinions on what will be most helpful in making the advertisement viral. This will directly decrease time taken deciding on advertisement templates, and allow companies to dedicate more time to their business and construction of the ad itself. This analysis will give social media managers a more enjoyable and efficient experience in performing their duties.

Conceptual Design

Interaction Perspective:

The system that the team is designing is an advertisement strategy recommendation application that allows a user to select specific preferences for the advertisement they want to create. It is organized by section based on the different functionalities throughout the application. The information contained in this perspective is derived from the interviews and observations that were conducted in Phase 1 (see Appendix A).

A user that has a target audience and a product to market can open the application and begin selecting the demographic for which they are creating the advertisement. After that, they will be given specific trends that the marketer can use for their own product. The user will also see explanations for the trends that are being shown. The user can then choose which trend to use for their advertisement and will subsequently be given the option to connect with influencers who implement similar trends on their own channels. If the user agrees to this option, they will be given the contact information and social media account names of these influencers. The user will create their advertisement and post it on TikTok. Afterwards, the application will show them the data and statistics of their advertisement so the marketer knows how to improve on future advertisements.

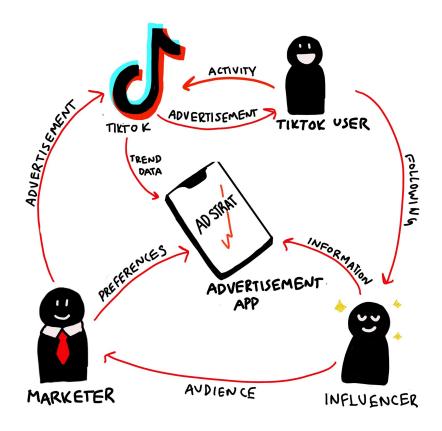
In order to explain this process to marketers, the team has outlined three metaphors to assist in connecting how our application works to systems in the real world.

<u>Metaphor</u>: The advertisement strategy application is a marketing assistant and data analyzer in your pocket.

<u>Metaphor</u>: The advertisement strategy application is the subway system, connecting different people who can benefit from this application together, from influencers and marketers to product creators and other employees.

<u>Metaphor</u>: The advertisement strategy application is an ergonomic chair, adaptable to the user and something the user can easily adjust for their specific needs.

Ecological Concept Sketch



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The ecological sketch provided depicts a broad environmental view of the advertisement application in relationship with its surrounding stakeholders. This emphasizes a cyclical process between TikTok users, TikTok, the applications, and marketers and influencers. This high-level interaction displays the close relationship between these different work domains, and shows the important role that the advertisement application will play in acting as an effective connector between the marketer and the TikTok users they are targeting.

As shown in the diagram, the advertisement strategy application gets trend data from TikTok, information from influencers, and preferences from marketers. With this information, the application can produce recommendations for advertisements that the marketer can use to promote the product of their business. TikTok users view the advertisements, have lots of activity on TikTok, and follow influencers. The influencers are allowing the marketer to broaden their audience and also give their contact information to the application. Overall, the application fits well into the system with the three stakeholders.

Emotional Concept Sketch



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The emotional concept sketch displays the main goal of the advertisement application, which is to make the job of marketers easier and less time consuming. The application provides an opportunity to avoid extensive research on recent trends, and allows marketers to focus more of their time on the quality of the advertisement and its aesthetic and social qualities. This will indirectly lead to a better relationship between the marketer and their work, resulting in better mental health and a work-life balance. The image depicts this distinction, the left-hand side showing a traditional process of building an advertisement, which involves extensive research and delay of projects being completed, a problem brought up by stakeholders in Phase 1 (see Appendix A). Meanwhile, on the right-hand side, the use of the application provides an opportunity to decrease the amount of work spent on this research and analysis, allowing the marketer to adopt a better work-outlook.

Interaction Concept Sketch



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The interaction concept sketch displays some snapshots of what the team believes will be the final design idea. The first depiction shows a user filtering their preferences for the trend they would want to implement, these trends relating to their product and business model. This provides a simple user-interface for the marketer to decide what they want to create, and the audience they want to reach. The second depiction is the page that would be displayed after this filtering of preferences, a list of trends that would be beneficial for the marketer to use, including descriptions and examples. The marketer in the image is choosing the trend at the top of the page, and will then bring them further into the application process.

Storyboards

Storyboard 1 - The Ecological Perspective



Marketer is given assignment to target college-aged students using TikTok



Marketer thinks about what to do, since they aren't updated on trends in that age group.



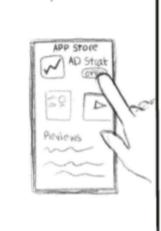
Marketer looks at phone in their orifice, in hopes of starting her large amount of research.



The marketer sees the Advertisement Strategy application.



Marketer sees the application as a possible solution.



Marketer opens the application.



Application opens.



Marketer is now viewing the homescreen of the application.

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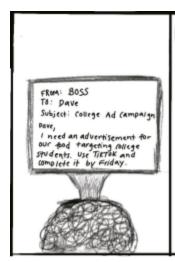
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The main concept that was focused on in the ecological perspective storyboard was the initial action of the marketer having a problem after being given an assignment, finding the application, and beginning to use it for their benefit. In relation to the phone, the application's actual physical environment is the App Store, and the user's phone screen after being downloaded. In a broader context, however, the advertisement application serves as a mediation between being given the project and creating the final product.

The focus on this environment leads to the involvement in many work practices in the marketing work domain. The first work task involves the marketer working for a company, and being given an assignment to create a new advertisement for a product often with a specific age-group for other demographics in mind. The storyboard also touches on the work practice of researching trends. In the marketing work domain, this is one of the most crucial, yet time consuming tasks that a marketer needs to complete. The advertisement application mainly focuses on this work practice, expediting the step between having a goal and implementing that goal into a final product in the broader ecological perspective of marketing.

To create this storyboard, the team took the initial ecological concept sketch, shown in Conceptual Design, which was a broad environment approach depicting the relationship between all stakeholders, and instead focusing in on the work place environment of a marketer. The main goal of the sketch was that the advertisement application serves as a connector between multiple aspects of the marketing process. This brought the team to consider the initial step after the application takes trend data, which is the action of the marketer finding the app and getting ready to use it in order to benefit their work process in the marketing work domain.

Storyboard 2 - The Emotional Perspective



Marketer is told to start an advertising campaign towards college students in a short amount of time.



Marketer displays frustration and stress towards assignment.



Marketer remembers they can use the advertisement application and feels relief.



Marketer completes assignment on time and feels happiness and relief once again.



College student is scrolling through TikTok.

User displays frustration and annoyance at receiving a repetitive and boring advertisement.

User gets the new food advertisement on their feed.

User is entertained and happy, making them likely to order the food advertised.

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The emotional perspective storyboard explores the emotional effect of the advertisement application on both the marketer and the TikTok user. In the marketer's perspective, they are being given an assignment to make an advertisement that targets an audience that they are unfamiliar with, college students. This leads to feelings of frustration until they realize that they can use the advertisement application. Using the application allows the marketer to easily find information about the trends college students enjoy, resulting in feelings of happiness and relief. These positive feelings are due to the application providing the marketer with more time to work on the advertisement, leading to a less stressful time constraint.

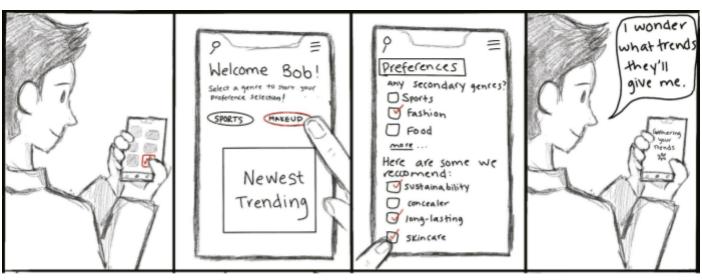
In the perspective of a TikTok user, they are initially shown as being frustrated due to being shown repetitive and boring advertisements. This causes the user to have negative feelings towards both their experience on TikTok and the business producing the advertisement. When the user sees the advertisement produced by the marketer using the application, however, their cycle of entertainment on TikTok is not interrupted. This subtle use of audience interests and trends causes them to have a positive attitude towards the business, shown by them wanting to purchase the product advertised. TikTok users that were interviewed in Phase 1 displayed this same need for subtlety and entertainment in the advertisements they viewed (see Appendix A).

One of the main work tasks of marketers is to make users display positive feelings towards their advertisements in order to increase profit, however, advertisements that are not

entertaining or subtle enough often cause the targeted audience to have negative feelings. By using the application, not only do marketers improve their own stress when trying to meet deadlines and collect quality research on recent trends, but also makes the task of appealing to the targeted audience much easier. Therefore, use of the advertisement application simultaneously improves the work task of making a quality advertisement and encouraging positive attitudes in the target audience.

The storyboard was derived from the initial concept sketch for the emotional perspective, which mainly focused on the emotional effects on marketers, specifically the advantage of gaining more time and improving a work-life balance. In this conceptual sketch, the use of the advertisement application eliminated feelings of frustration and exhaustion, shown by the contrast between working overtime without the application, and finishing work efficiently with the application. From this sketch, the storyboard expands on this perspective and includes the emotional effects on the TikTok user viewing the advertisement as well. This was seen as necessary in order to include the larger sphere of emotional effects that the advertisement application has on all of its stakeholders.

Storyboard 3 - The Interaction Perspective

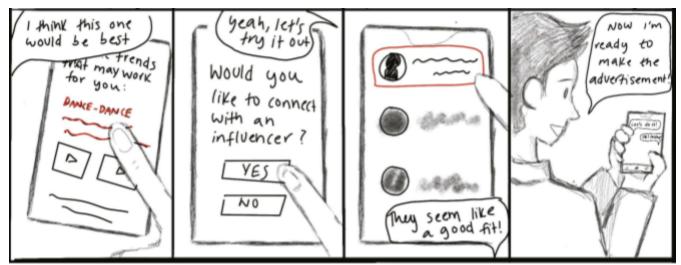


Marketer opens the application.

Marketer views the home screen and selects the "Makeup" genre to start narrowing down preferences.

Marketer selects specific preferences for the advertisement they will create.

Marketer waits for trends to load.



Marketer selects the trend they want to use.

Marketer is given the option to connect with an influencer, and they choose yes.

Marketer chooses an influencer.

Marketer communicates with influencer and gets ready to make the official advertisement.

To better view this image click on this link:

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The emotional perspective storyboard displays a full sequence of a marketer using the application, from opening the application to being ready to construct the advertisement. The interactive perspective was considered through the idea of how the marketer would interact with the application itself, an important aspect of usability and effectiveness of the application. This was shown in the storyboard by depicting transitions between screens, how the recommendation processes will progress after each transition, and how the marketer reaches the point of being ready to create an advertisement. Through this interaction, there is a necessary emphasis on an easy-to-understand user-interface, as well as a simple recommendation process.

The primary work task that interaction with the advertisement application affects is understanding recent trends. The filtering screen allows the marketer to specify their preferences and aspects of their products or business that are important to convey to their target audience. This leads to a thorough description of multiple trends that have the most popularity, and would be most effective for the advertisement. These descriptions are crucial for the marketer to understand their target audience and what their advertisement needs in order to be appealing. This results in the work task of understanding recent trends and becoming acquainted with the target audience much easier, making construction of the advertisement much more effective and successful.

The storyboard was derived from the initial concept sketch for the interaction perspective, which displays the first snapshots of some of the interactive screens in the recommendation process. This included the screen to specify preferences of the marketer, as well as the page that describes the most applicable trends. The storyboard expands on this and depicts the entire interaction of a marketer using the application in order to fully display the process.

Claims

Claim 1

Title

Trends are explained to the user based on their target audience.

Feature

The advertisement application provides and sorts data, and gives an explanation on specific trends that are related to the product and target audience.

Upsides, Downsides, and Rationals

+ marketers can now advertise the product more effectively

The marketer has an easier time advertising which will allow their business to operate more productively and in effect, grow faster.

+ marketers can see what is popular with their target audience

It is important for the marketer to understand what is popular with their target audience because it will allow them to market more effectively.

+ saves the user time

The application displays best results at the top, so it saves the user time because they don't have to click on each trend to view its effectiveness.

+ helpful marketing tips

The application shows videos on how to market using certain trends, and that will allow the marketer to be more effective in marketing their product.

+ TikTok users will see more relevant advertisements

Now that the marketers understand what their target audience wants to see, they will produce better advertisements that their audience will enjoy watching. This will cause their target audience to be more persuaded to purchase the product.

user might not be able to handle all of the data

According to Harrison, Tatar, and Sengers (2007), there are three design paradigms. The second one is focussed on human information processing, and an example is that an

application designer only shows the user as much information that is humanly possible to comprehend at once. This shows that we do not want to overwhelm the user with too much data.

target audience may be unknown

The marketer may not know who their target audience is, and that will make it more difficult for the app to give accurate data on how to market.

trend implementation may be difficult

The marketer may not know how to implement the trends with their own product. The explanation of the trend may not be enough in determining how to use the trend with their own product.

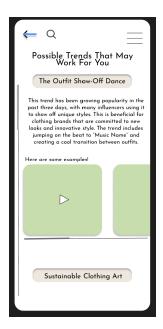
- trends might be limiting towards a specific genre

Categories may include very small amounts of trends for companies to use and may be too limiting for each specific genre/type.

- trends with less numbers might be seen as unpopular

Users may be reluctant to try the trends at the bottom of the list with less numbers and may spend less time exploring the application.

Picture:



Here is a link to better view the photo (labeled Claim 1):

 $\frac{https://www.figma.com/file/IQ7hPP7kPF8j1mlskNhv8h/Wireframes-P2?node-id=46-160\&t=5nkWDdg2P5Y0k1od-0$

Claim 2

Title

Simple user interface makes it easy for the user to navigate through the application.

Feature

The strategy application has a simple interface that is easy for the user to navigate because it includes a scroll feature and many buttons that link to other parts of the application.

Upsides, Downsides, and Rationales

+ easy for the user to navigate through

According to an article written by Gerry McGovern, navigation is one of the most important things when considering the usability of an application. The user will be more incentivized to use an application that is easy to navigate through because the process produces a higher level of satisfaction within the user.

+ organized for easier access

The application is organized, which will make it easier for the first-time users.

+ short amount of learning time with the application

It does not take much time for the user to understand and use the app.

+ users receive the best results first

The statistics are organized so that the user will receive the trends with the best data first. That way, the user will not need to search through the trends and figure out which ones are the most popular out of all of them.

+ saves time when searching

Displaying best results at the top saves the user time by not having to click on each trend to view its effectiveness.

- marketers might use the application too fast

The marketer may not think through all of the information they're entering since the app can be used very fast.

limited amount of information displayed

The user may not understand that there is more information to scroll through.

marketers might miss some information

Newer trends may not be seen by users (due to lack of data) if they do not scroll lower on page.

too many clicks

The user may have to click on too many buttons or dropdowns to get to the page that they want.

- do in one sitting

The user has to complete the trend search process in one sitting or else their data may be lost.

Picture:



Here is a link to better view the photo (labeled Claim 2):

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Claim 3

Title

Marketers are able to connect with influencers about creating advertisements with trends.

Feature

The strategy application allows for marketers to have the option to connect with influencers who use the selected trend and market similar products.

Upsides, Downsides, Rationales

+ improves search engine optimization

According to an article by Shane Barker, using influencers to market and sell products will increase the businesses' search engine optimization. This means that when users search for products that the business sells, that specific company will be more likely to show up near the top of the search engine.

+ easy connection

The application provides a list of influencers and their contact information so that the user can easily connect with them.

+ gives guidance on the trend

If the marketer does not understand a trend, the influencer can show them how it is used, and also give them ideas on what they could do for their advertisement.

+ endorsements for product

An influencer with a lot of followers will be able to get many TikTok users to view the advertisement, which will increase the number of people who view and purchase the product.

+ sorted by relevance and rating

The influencers are sorted by the relevance to the product being advertised and also their rating. That way, the marketer will have an easy way to find an influencer who will best fit their needs.

depends on availability of influencer

The influencer may not be available when the marketer messages them, so the marketer will have to wait for a response from the influencer when they are available.

unethical to pay for views

Paying influencers with a high number of followers may be seen as unethical because the business owner would be paying more for more views.

limited variety

Only influencers who agree to be shown on the application will show up, so there may be a limited number of them that the marketer can choose from.

- may not be able to find the right influencer

The influencer who is the best fit for the job of marketing the specific product may not be on the platform, and the marketer might have to look somewhere else for someone to promote their product.

expensive

The marketer might have a tight budget, and if the influencer that they choose does not fall within their budget, then the marketer will not be able to use the influencer to advertise for their business.

Picture:

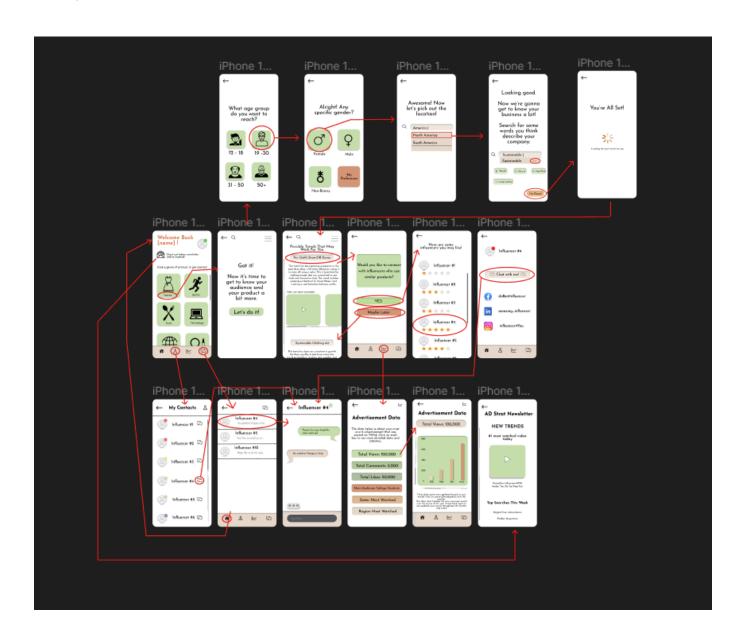


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Wireframes

Link To Wireframe:

https://www.figma.com/file/IQ7hPP7kPF8j1mlskNhv8h/Wireframes-P2?node-id=0%3A1&t=oiyNxzyzoANqArVp-1



Explanation with Work Practices

The Advertisement Strategy Application aims to support many work tasks that marketers take on in their daily routine. The first work task can be seen in creating an advertisement that is enjoyable and subtle for the target audience, which in this case is college students. Through providing examples and explanations of trends marketers can use, the application makes advertisements fall in line with what college students already find entertaining, resulting in a positive emotional impact on the audience. In addition, the application also aims to support the work practice which involves connecting with influencers and collaborating on advertisements. This is done by providing numerous influencers willing to take part in the specific advertisement, as well as their ratings in relation to popularity and opinions of other marketers. This results in a useful impact since, while connecting with influencers could be easy without the application, it provides an easy connection between creating the advertisement and finding a specific influencer that falls in line with the marketer's vision. It also improves communication between marketers and influencers in the sense of price agreement and willingness for future projects. Both of these work tasks will be completed at the end or throughout the slide sequence, as well as the selection of preferences for advertisements, and identification and explanation of trends in regards to these preferences.

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Acknowledgement

In adding my name to this page, I acknowledge that all contributions to this project are my own. I understand that <u>any</u> use of online tools like ChatGPT, conversational Als, or other smart assignment completion tools counts as an honor code violation with an automatic report to the Office of Undergraduate Academic Integrity and the Honor Court. I understand that the course staff can use online plagiarism detection tools to verify the originality of my submitted work and to detect any such violation.

I also acknowledge that I've read, and I fully understand the honor code pledge posted on the homepage of the course website. I know that any instance of cheating, plagiarism, falsification, fabrication, multiple submissions, complicity will result in reporting of said instance to the Office of Undergraduate Academic Integrity and the Honor Court.

Member 1: Namita Shashidhar, 3/25/2023

Member 2: Jillian Ylagan, 3/26/2023 Member 3: Clara McDaniel, 3/26/2023 Member 4: Mayali Clary, 3/26/2023

Appendix A

WANs:

Listed below are the WANs that were recorded across the two interviews and multiple observation sessions and were then subsequently organized within a WAAD.

- U1 I believe implementing Tiktok trends are causing ads to get the most views.
- U1 We do not have funding to buy targeted ads.
- U1 I need a way to make the ads subtle.
- U1 I can't repeat the same ad often.
- U1 I would like to have our target audience be Blacksburg students.
- U1- I need to make videos that are interesting to people outside of the community.
- U1 I find Tiktok useful for reaching new people.
- U1 I want our ads to increase attendance for our events.
- U2 Using a Pop Socket on my phone makes it easier to scroll.
- U2 I prefer content that matches my interests.
- U2 If I see content that doesn't match my interests, I tend to scroll away quickly.
- U2 I do not see a lot of educational content on TikTok.
- U2 If a video is really engaging, I tend to watch the whole thing regardless of its length.
- U2 I often exit the app if I encounter numerous uninteresting videos in a row.
- U3 When I encounter an ad, I sometimes exit the app.
- U3 -I sometimes encounter three ads in a row, and it makes me feel frustrated.
- U3 I watch advertisements if a creator I know is endorsing it.
- U3 I encounter a lot of ads that have extremely high volume, making it inconvenient to lower the volume immediately.
- U3 I like to look for and discuss the new trends that have come up on the app.
- U3 I saw a video that was advertising a product, but did not have an official indication.
- U3 I often watch Tiktok for an hour straight.
- U4 I am often very engaged with the TikTok application.
- U4 I tend to forget the video I view.
- U4 I scroll very fast on the TikTok application.
- U4 Whenever I encounter a video that I dislike, I often scroll past it quickly to not interrupt my engagement.
- U4 While I use both theFor You Page, and the Following page, I tend to use the For you Page.
- U4 I usually just like Tiktok videos if anything, I rarely comment.
- U5 I will purchase a product advertised on Tiktok if it's cheap.
- U5 I tend to like ads that are more subtle.
- U5 I get annoyed when I get a lot of ads about something I don't care about
- U5 I usually buy clothes that are advertised on Tiktok.

- U5 I often say "Not Interested" on weird ads.
- U5 I like cute advertisements.
- U5 I think appliances advertised tend to match my interests.
- U5 Ads that seem corporate don't interest me.
- U6 I don't like slow-paced ads.
- U6 I find ads that use trends enjoyable.
- U7 I have used split testing to figure out who my main viewers are.
- U7 I have found that trend hacking is an effective way to advertise.
- U7 I post small parts of my show to get people curious about it.
- U7 I want to create a "hook" in my short videos so people will want to come back for more.
- U7 I want to stay in contact with my viewers outside of social media, so I have an email list as well.
- U7 I believe that marketing tools are very effective, which is why I pay for them.
- U7 I started marketing on TikTok because my friends said it would be a good idea
- U7 I know that it's important to know my audience so I can cater to them in my TikTok posts.
- U8 I like making videos that are humorous to the audience.
- U8- We like to make funny, relatable videos about golfing while wearing our shoes to show them.
- U8- I find TikTok to be an appealing platform because it is a free way to market.
- U8- I like to use TikTok to market because the algorithm allows for high engagement
- U8- I feel that I can still make a name for myself on TikTok even if I don't have a high follower count.
- U8- We are currently working on reaching out to TikTok influencers.
- U8- I want to break the stigma of an "elitist" attitude around golf.
- U8 We created the shoe because it is something we wanted ourselves
- U8- We created Forelife as a golf shoe company for the casual/average golfer
- U8 I want to find a marketer who can put more time into creating content.
- U8- I Find it difficult to get enough content out as my colleagues and I both have full time jobs running this as a side business.
- U8 If I focus too much on my product in the ad, it doesn't do well.
- U8- I am able to appeal to my target audience easily since we are around the same age.
- U8 I often try to create content that is relatable to my audience.
- U8- People ages 18-26 are who pay the most attention to our advertisements
- U8 Our target audience is college students & young professionals.
- U8- I do not like to use other platforms like instagram because I have to pay to market myself.
- U8- Without TikTok I would not have a business.
- U9- I create advertisements for myself and other companies.
- U9 I believe that SFV is very popular with the younger generation.
- U9 I am unsure of how much TikTok increases my viewer numbers on my Youtube

Channel.

- U9 My business is making fishing videos on YouTube
- U9 I want to show a small clip of my long form videos to SFV
- U9- My popular TikTok videos are usually of me catching impressive fish
- U9 I mainly use TikTok to bring attention to my LFV.
- U9 Not having TikTok wouldn't hurt my business, however, it does help it gain a little traction.
- U9- I think TikTok's algorithm allows for faster growth than Instagram.
- U9- I use TikTok because it is free and an easy app to use.
- U9- I find TikTok very easy to use.
- U9- I am able to post frequently because I repost short clips from my YouTube
- U9- I once made 20 TikTok videos in a night

Requirements:

Listed below are the requirements that the team created from a few of the work activity notes that the team thought were important.

Work activity Note #1: "I need a way to make the ads subtle."

Need: Advertisements to be more subtle and less in my face.

Rationale: Advertisements, which are subtle are actually much more powerful. No one likes to be told what specifically should be bought.

Interaction Requirement: Users should be convinced by an advertisement and make their own decisions on what to buy. They should not feel forced.

Corresponding System Requirement: The advertisement analysis system should understand if users are feeling overwhelmed by a particular advertisement/ if users are not taking away what the advertisement creator was actually intending.

Work Activity Note #2: "I need to make videos that are interesting to people outside of the community."

Need: Ads need to reach out to a larger audience that would not normally be exposed.

Rationale: If a marketer is only reaching the same audience repeatedly, their business will not grow and funding for advertisements will be wasted.

Interaction Requirement: Users of TikTok should view ads that are targeted towards them in ways that align with their interests.

Corresponding System Requirement: The system will analyze specific audiences that the marketer wants to reach, and will return information based on what should be done to reach their algorithm.

Work Activity Note #3: "I watch advertisements if a creator I know is endorsing it."

Need: Connection with advertisers to build a trusting relationship with the viewer of the ad.

Rationale: Social media users usually form parasocial relationships with influencers they often interact with. When these influencers display an interest in a certain product and provide a positive review, the user is more likely to purchase the product or take part in the event as well.

Interaction Requirement: Users should see their favorite influencers advertising products that they would be interested in as well.

Corresponding System Requirement: The analysis system shall collect information about influencers and connect with them based on their availability and preferences on products they will endorse. The system will then provide this information to the marketers in the influencer's price range, and allow for easier connection between marketer and influencer.

Work activity Note #4: "We do not have funding to buy targeted ads."

Need: A way to target certain demographics without spending money

Rationale: Different advertisements are meant for different demographics. It is important to make this distinction in order to gain the maximum number of people interested in a certain product. If an advertisement is created and is appropriate for all ages, it may not be as effective if the target audience is very specific.

Interaction Requirement: Users should be able to feel that a particular advertisement specifically applies to them.

Corresponding System Requirements: The advertisement analysis system will collect data on which audiences a specific advertisement is reaching. This can help creators figure out how to appropriately change their advertisements to appeal to the correct audience.

Work Activity Note #5: "I get annoyed when I get a lot of ads about something I don't care about."

Need: Only show ads to the user if it's something that they're interested in.

Rationale: If a user is not interested in a topic, then the user will not see ads on that topic.

Interaction Requirement: Users of TikTok shall be able to press a "Not Interested" button to show that they don't like a certain ad, and in effect they will not see related ads as well.

Corresponding System Requirement: The system will store data containing the topics that the user is and isn't interested in, and based on this data, the system will sort the ads and only show the user what they think would be appealing to them.

Appendix B

Personas



Jane Doe

Age: 48

· Occupation: Business advertising

Location: Vermont

Bio

Jane Doe needs a way to involve college students, but has been having a hard time targeting this type of audience. Jane Doe would greatly benefit from using our advertisement management system as there are so many ways she could use this product. Primarily, she could use it to narrow down who a specific advertisement is truly attracting. She can then gather and analyze data to modify her advertisements or even create new ones. Additionally, as Jane Doe is the head of the advertising team, she often has projects where she needs to persuade all kinds of audiences and ages. Thus, this product could really help her for any demographic she is trying to reach.

- She has been working in a business for a while.
- She does not have a lot of free time and spends too much time working.
- She has a hard work ethic but is struggling with their latest assignment: getting college students interested in their newest product
- She is trying different strategies but is failing.



Christina

• Age: 28

· Occupation: Fashion Marketing

· Location: New York City

Bio

Christina is looking for ways to get more ways to get college students interested in the fashion brand she works for. Our advertisement management system would be incredibly beneficial for her as it would allow her to browse through trends that may use fashion/clothing as a centerpiece that target her desired agegroup. Additionally, using this system would allow her to quickly find trends without having to spend hours researching, saving her time on her strict deadlines.

- Christina works for a fashion company that targets its designs towards college students
- Although Christina is not much older than her target audience, she is not up-to-date on social media trends with college students.
- She is aware that TikTok is the best way to reach her audience, but is unsure of what type of videos would be beneficial marketing tactics for her brand.
- She has extremely strict deadlines for completed projects, but has a very busy schedule.



Mark

- Age: 20
- Occupation: Marketing intern
- · Location: Blacksburg, VA

Bio

Mark is looking for ways to optimize the amount of trends he is able to use in advertisements. Using our advertising marketing system would be beneficial for Mark, as it would show him multiple trends that he may not have seen on his own 'For You Page' on TikTok; this would allow him to reach even more people around his age. Additionally, the application would allow for a wider selection to help him narrow down what trends would work best with the product he's advertising for.

- Mark is currently a marketing intern for Dell.
- Dell has released a new product that will making note taking easier for college students. It is apart of Mark's internship to help the company come up with ways to market their product.
- Mark is aware of some TikTok trends, but feels like he could expand further into TikTok's algorithm if he were able to see a broader spread of trends for people his age.
- Mark wants to make a good impression on the company by using as many trends as possible for social media marketing.



Lucy

- Age: 19
- · Occupation: College student
- · Location: Virginia

Bio

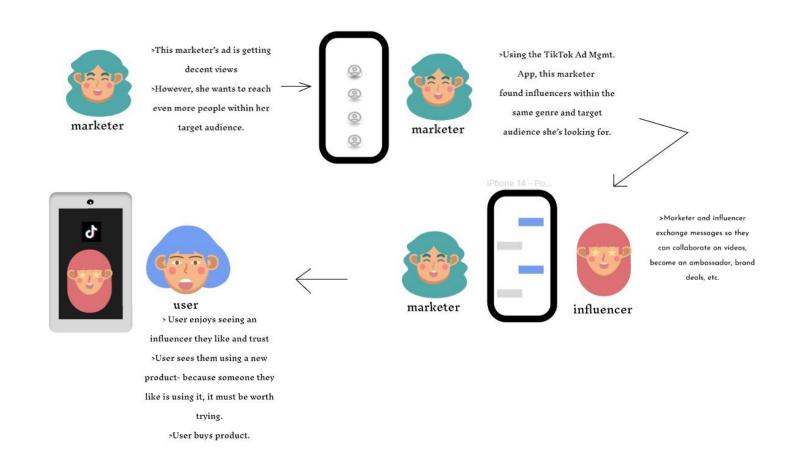
Lucy spends a substantial amount of time on social media, especially on TikTok. She finds herself aimlessly scrolling through blaring ads that tend to be repetative. She wants to stay up-to-date with new trends, but finds herself annoyed with the ads on TikTok. She doesn't have much money to spend, but she would be willing to do so if she would the product to be desirable enough. She is much more likely to buy products when the marketing and advertising is enticing and entertaining enough.

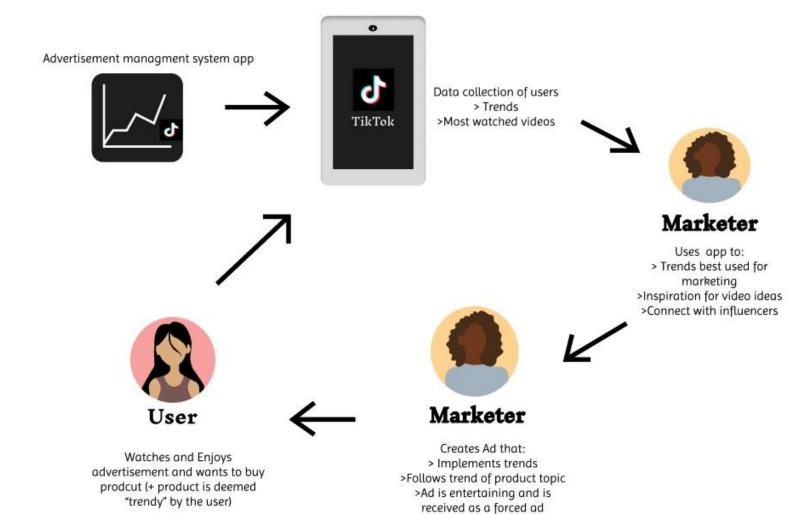
- Most of the time that lucy spends on her phone is on TikTok.
- She's tired of scrolling past annoying ads that shove products down her throat
- She's tired of seeing the same advertisement over and over again
- She feels like she never wants to buy anything from these ads because they don't seem interesting or trendy in any way.
- Because of her limited budget, she's very selective of what she buys

Appendix C

Ideation and Critique

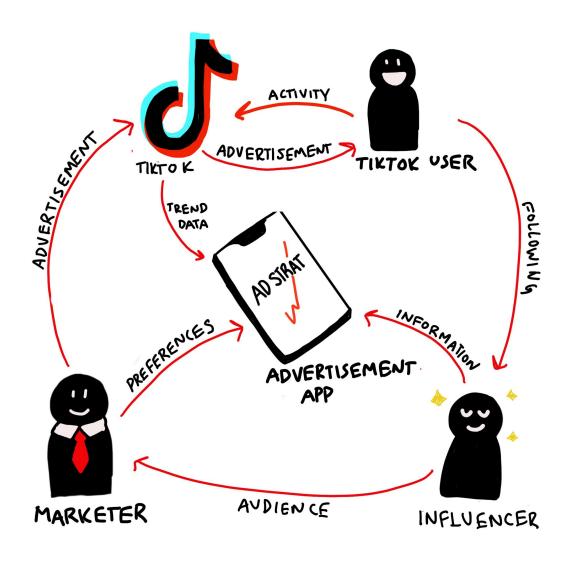






Appendix D

Conceptual Design





Appendix E

Storyboards



Marketer is given assignment to target college-aged students using TikTok



Marketer thinks about what to do, since they aren't updated on trends in that age group.



Marketer looks at phone in their orifice, in hopes of starting her large amount of research.



The marketer sees the Advertisement Strategy application.



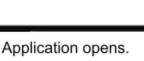
Marketer sees the application as a possible solution.



Marketer opens the

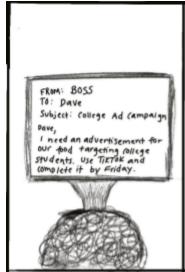
application.







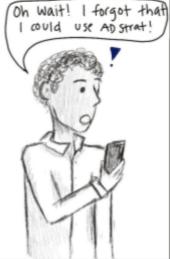
Marketer is now viewing the homescress of the application.



Marketer is told to start an advertising campaign towards college students in a short amount of time.



Marketer displays frustration and stress towards assignment.



Marketer remembers they can use the advertisement application and feels relief.



Marketer completes assignment on time and feels happiness and relief once again.

This is actually

fun to watch! I'll

definitely order their

food tonight



College student is scrolling through TikTok.

User displays frustration and annoyance at receiving a repetitive and boring advertisement.

User gets the new food advertisement on their feed.

User is entertained and happy, making them likely to order the food advertised.



Marketer opens the application.



screen and selects the

narrowing down

preferences.

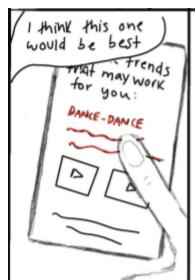
"Makeup" genre to start

Preferences any secondary gences? Sports (fashion] Food more ... Here are some we recomend: Sustainability O concealer Vong-lasting Skincare

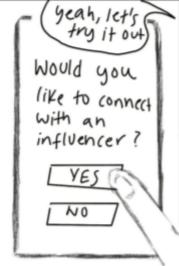
Marketer selects specific preferences for the advertisement they will create.



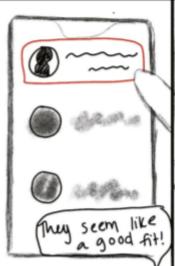
Marketer waits for trends to load.



Marketer selects the trend they want to use.



Marketer is given the option to connect with an influencer, and they choose yes.



Marketer chooses an influencer.

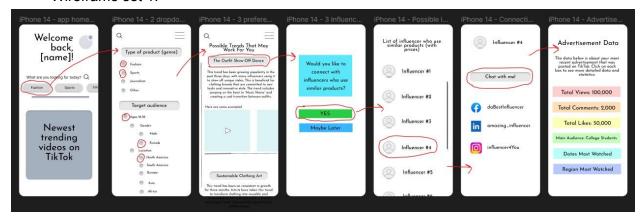


Marketer communicates with influencer and gets ready to make the official advertisement.

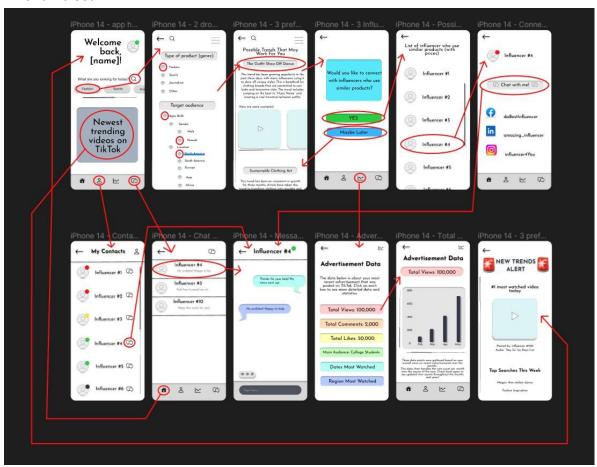
Appendix F

Wireframes

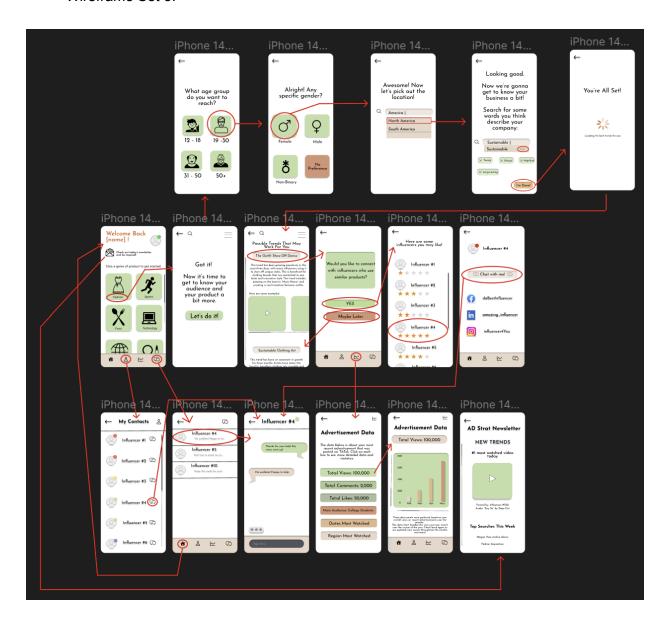
Wireframe set 1:



Wireframe set 2:



Wireframe Set 3:



Closeups:

