Proposal for RIT Foodie(TBD)

Project Team Members

1. Summary / Conclusion Writer & Overall Editor: Will Edinberg
2. Market Researcher: Jonathan Cameron
3. Product Designer: Samantha Piper
4. Devil's Advocate/Critic: Trevor Schreibeis

App/Product/Website Ideas

Sam - an App that tells you the most optimal time and place to go to eat breakfast, lunch, and/or dinner on campus, in order to avoid a busy line, once given the contributing information of the campus, your dorm, weekly schedule, and wake-up time

Trevor - an app that you can enter a food order from a dining hall and select a scheduled time when the order goes through. Can have multiple meals during the day so that you only have to worry about swinging by the dining hall and grabbing it once a weekly food schedule has been entered. Send a notification to your phone to confirm you are going to pick it up before it submits the order. Or send a person to stand in line for you

Final Idea: RIT Foodie(TBD) - An app where you put preferences for food into the app and schedule, dorm, wake up time and it automatically orders food based on preferences and proximity to dining halls to be ready when you are free so all you have to do is swing by to pick it up.

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1. Executive Summary (Overview)

RIT Foodie is extravagantly and intuitively designed for every kind of college student. This app encapsulates just what every college student wants: to not waste any brain power on anything other than classes. Every college student knows the feeling of when classes are over: "now where do I eat?" All one has to do with our app is to input their food preferences and schedule into the simple UI and let the AI do the rest. Our in-app AI will configure an entire week's worth of optimized food options and places to make the student's life so much easier. The best part, *RIT Foodie* is 100% customizable. Don't like eating Mexican food on Mondays, just edit that day's schedule! Prefer to walk less for food on Thursdays, just change it! With this level of customizability, one can easily configure a schedule that works for them. To reinforce this

incredible app, is our team that has worked tirelessly to test, correct and make sure all the features and functionality work as expected. After seeing the research and features that this proposal has to offer, you will be amazed at what great ideas and work our team has done to make life that much easier for every RIT student.

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2. Market Research and Need Analysis

The ***Market Researcher*** will present the research that supports the need for the application. This section should include:

RIT Foodie has some existing competitors most notably the *RIT App* which has a section that shows dining locations on campus, their times, along with line estimations, and has an online ordering system. However the *RIT App* does not accurately show how long some of the lines are, some instances being it showing almost no one at the location just for the line to be out the door or for it to show the place being overrun with customers and for there to be just a few people waiting in line. Another shortcoming of the *RIT App* is that the online ordering feature has been down for the past few weeks with little communication to anyone outside of dining as to if anything is being worked on to bring it back to functionality. In a survey we conducted we found that 75% of students are tired of waiting in lines that are longer than the *RIT App* claimed they were, and 100% of students that took the survey claimed to be having issues with the online ordering feature. The potential social ills that could be created by our application is that people might get into such a set schedule that keeps them from going to other dining locations or the food trucks so the way we will address this issue is by keeping dinner unscheduled on weekends to get users to try different dining options.

Other requirements:

- Provide charts and graphs that help to visually communicate relevant research to the reader
- Provide screenshots of competitor apps

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3. Product Description

Core Features of the App(aided with ChatGPT, specifically in terms of simplifying and generalizing each category under a name that I could then describe in more detail):

➢ *Sign-up:* Upon opening the app, the user is directed to a classic sign-up page where they can enter their RIT email address and be redirected to the official RIT sign-in page. Signing into

their RIT account allows the program to receive their class schedule, dorm information, and details about any work, clubs, and sports they are involved in, in order to begin the meal planning process.

- *Form:* Once signed in, the user will be brought to a short form asking for wake-up time, allergies, dietary preferences, payment preferences, walking distance preference, and estimated meal time(how long the user plans to eat). All of this information will help further the algorithm for the meal planning process

- *Meal Prep List:* Once the form is filled out, the user will be sent to a home screen that shows a list of planned meals for the day(or next day, depending on time of download), showcasing the meals, places, and times as they would appear later on in the notification form. The user can make any edits/changes, additions, and/or remove anything deemed necessary that will affect later processes. Once any needed changes are made to the meal plan schedule, the user will rarely ever need to go back onto the app.

- *Acceptance Notification Screen:* Once the setup process is done, the user will only need to pay attention to notifications sent regarding following through with the meal plan. Almost immediately after the user wakes up, and 30 minutes before the AI's intended order time, a full-screen notification containing information about two different meals(places and times included) will appear for the user to choose between. There is also an 'X' for the user to cancel ordering altogether. Note, once the order is canceled, the program will not adjust its timing for a new meal; it will continue to the next.

- *QR Code:* Once the order is placed, a QR code will be sent to the user to be scanned when picking up the order

How the user interface (UI) and user experience (UX) are designed to meet the needs of the target audience:

This app is meant for college students; specifically, the students with early morning classes, short in-between class times, and tight after-school schedules between clubs, sports, work, and/or homework. It is designed to limit the time it takes for students to both decide what to eat and then wait in line.

Despite the unavoidable, initial complexity of the setup, in the long run, this app is meant to be a simple platform that students can navigate quickly and without much learning of the system. Some of how we intend to execute this goal are: (aided using ChatGPT to find other under-the-radar aspects of the app that would be considered under User Experience, that I could then describe in detail)

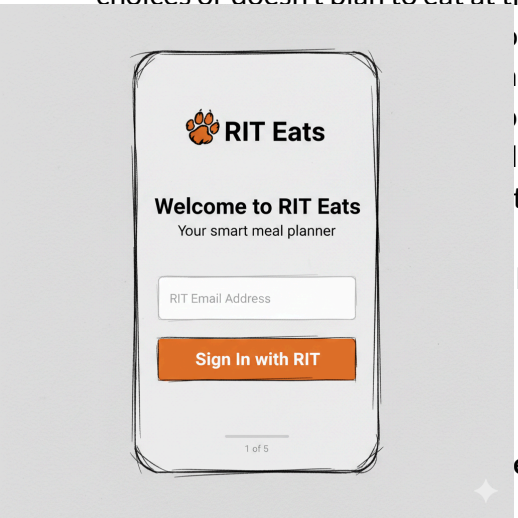
- *Quick Sign-Up:* The user is able to sign up through their RIT email, providing the program with their schedule, dorm, and extracurricular activities in order for meal plan customizations. This limits the amount of customization the user will have to do manually. Additionally, it keeps the process simple by having the classic RIT sign-in.

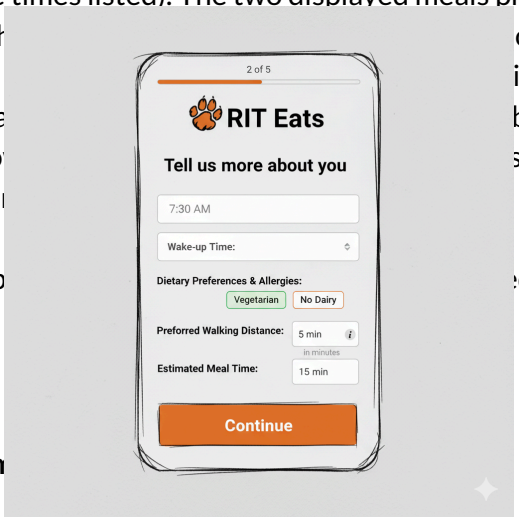
- *Preference Form:* Quick, short answer, and dropdown questions asking for wake-up time, dietary preferences and allergies, preferred walking distance(in minutes), and estimated meal time(how long the user may spend eating). Contains a short answer, dropdowns, a progress bar, and hints to make the user form experience simple and short to prevent user and decision fatigue.

- *Meal Prep List:* Shows user an example of planned meals(including places and times) for the day(or next day, depending on time of download), so that the user can then edit, add, or remove anything they deem necessary– a one-time setup that the AI then uses for future meal planning. Essentially, once set up, the app does busy college students a favour and runs in the background– users rarely have to open the app after setup. This section also contains clear pictures and big, spaced-out text for the user to read easily and quickly.

- Smart Timing & Order Tracking: In order to determine the best time for meals based on class schedule, ensuring the user does not get too hungry, and that it is not too soon after the last meal, the app's algorithm will contain the ability to track past orders and their time intervals(along with the other aspects of information), so that the meal plan has the best possible times.

- *Acceptance Notification Screen:* A full-screen notification containing two different meals(places and times included) pops up on the user's phone almost immediately after they wake up and then 30 minutes before the AI's intended order time. This notification screen also contains an 'X' in case of cancellation(that is, the user either does not like the choices or doesn't plan to eat at the times listed). The two displayed meals provide the user





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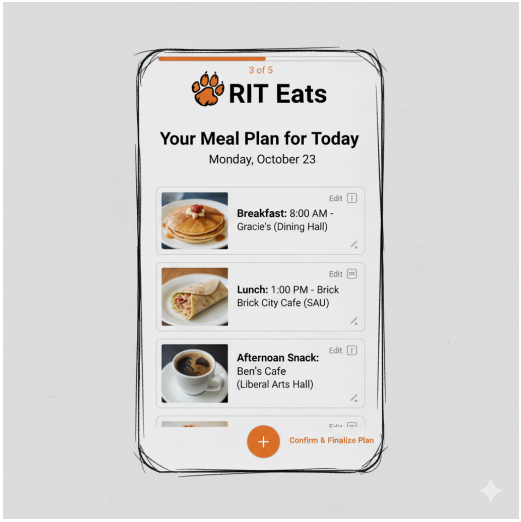
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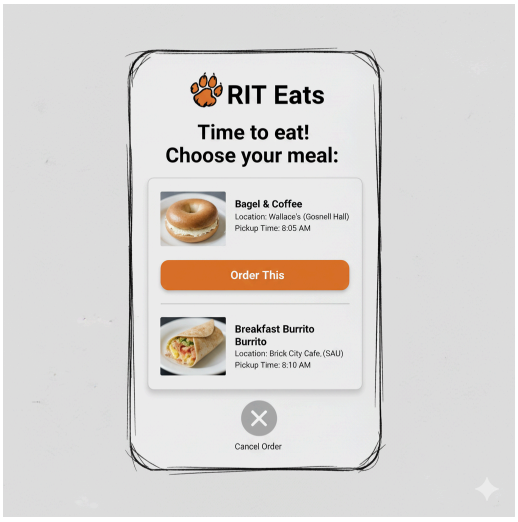
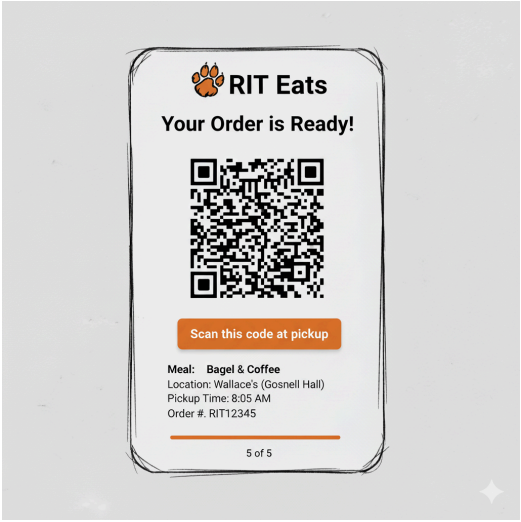
RIT Eats
Your Meal Plan for Today
Monday, October 23
Edit
Breakfast: 8:00 AM - Gracie's (Dining Hall)
Edit
Lunch: 1:00 PM - Brick Brick City Cafe (SAU)
Edit
Afternoon Snack: Ben's Cafe (Liberal Arts Hall)
Confirm & Finalize Plan


RIT Eats
Time to eat!
Choose your meal:
Bagel & Coffee
Location: Wallace's (Gosnell Hall)
Pickup Time: 8:05 AM
Order This
Breakfast Burrito Burrito
Location: Brick City Cafe. (SAU)
Pickup Time: 8:10 AM
Cancel Order


RIT Eats
Your Order is Ready!
Scan this code at pickup
Meal: Bagel & Coffee
Location: Wallace's (Gosnell Hall)
Pickup Time: 8:05 AM
Order #. RIT12345
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4. Possible Issues and Counterarguments

The ***Devil's Advocate/Critic*** will identify potential criticisms or challenges to the proposal. Address the following:

- Possible objections to the need for the product (e.g., "Is this already solved by existing apps?")
- Technical or financial challenges that could arise during development
- How your group plans to overcome these challenges or justify the product's relevance despite objections

Possible Challenges

The problem that RIT Foodie plans to address is the need for more time for students enrolled at RIT; while also giving ample opportunity for said students to have a healthy and balanced diet. The features in the app are similar to apps that have already been developed, be it the restaurant's own app for ordering online, or apps like doordash and uber eats. These apps lack the main functionality that RIT Foodie plans to incorporate into their design. They are focused more on delivery and pickup time after the order has already been placed. RIT Foodie eliminates the need to remember or wake up to order food ahead of time, on an already busy day.

The app will compile a lot of information together to automatically suggest a meal that can be ordered in the click of a button. The aim is to make the task of ordering food online less of a hassle and also combatting the need to wake up a lot earlier in order to beat the lines. The app will have an artificial intelligence-like system that will suggest food to places based on proximity, line duration, meal preferences, schedule, wake time, and dietary/allergy information. All of the information stated before will be entered into a database when the student creates an account on the app. Already there may be some issues for potential users.

Artificial Intelligence:

First and foremost is the use of Artificial Intelligence. There are many people who disagree with its use for a variety of reasons. Because of their feelings towards it they will be skeptical or completely avoid anything with it in use. This general disposition towards AI will affect the total number of people who are willing to use the app.

Location and information Tracking:

In order for the app to function properly personal information must be collected in order to give the best results to the user. If the users are uncomfortable with providing the information

such as their whereabouts at any given time for days to come then they won't be able to use the app to its fullest potential.

RIT Online ordering:

One of the selling points of the app is that RIT Foodie will send a notification, similar to Duo Mobile, that suggests a couple of meals at different dining halls during a student's down time. All that the user needs to do is select one or the other and the food will be automatically ordered online. For the time being RIT has disabled this functionality in their dining experience for some reason or another. If this feature of RIT dining is not operational ever again then RIT Foodie will become a meal suggestor. Telling the user which line is the shortest closest to them. It will still have some features however it becomes as easy as one click to a whole ordeal that may not even help with the lines.

Another issue with RIT online ordering is that during rush at a dining hall the online orders will be disabled. This can affect the app in two ways, the first is limiting the user to dining halls that are further from their current location. The second is that the app may be able to determine when this may happen and in order to combat this will order a lot earlier, causing the food to not be as fresh upon the user's arrival.

Line Length

If there are enough students who use the app it will become harder for the app to correctly allocate students into the shortest line. To expand further, if the app has 200 students who are free and all near a dining hall with no line, and they all are deemed available during the same time then the app may send 200 students into that dining hall making the line go from nothing to all of a sudden 200 students long in a second.

Another issue is obtaining the correct information regarding the actual line length. The wait times are inputted by students and that information is used until the next major change occurs. Most people after waiting in a long line may feel they would put in this information to be helpful. However, the developers of RIT Foodie feel that students who experienced no wait at all may be less likely to think about updating the wait time. The general inaccuracy of the current system will most definitely cause issues unless the app can also input changes into the wait times of the dining halls.

Overcoming Challenges

Artificial intelligence

To combat the exclusion of those with a disposition to AI will require an immense effort and capital to create an algorithm that addresses all the automation we plan to implement. Without these resources the app won't be able to determine the best place and when and may run into conflictions when suggesting.

RIT Online Ordering

This challenge may be one of the largest as it is out of the hands of the developers. However a possible solution is to create a student petition on PawPrint to reinstate the ability to order food ahead of time. Even if we generate a large student backing, the staff of RIT can decide to deny the contents of our petition.

Also the RIT online ordering does not have the ability to place an order with a scheduled pickup. It will just be made as the order comes in, being ready around 15 minutes after the order is placed. Since there is no way to schedule a pickup the app will have to determine the correct time to order based on the user's availability. To combat this there may be a need for another field in the data that is collected focused on the user's preference on how long they are willing to let their food sit out. This will help create more opportunities for the user during peak eating times.

Location and Information Tracking

There is not much we can do to combat the ill feelings of having your information tracked other than creating a very secure database where it will be stored. However, even that may not be enough to convince people. Also, the creation of this secure database will require effort and capital since the creators want it to be a free experience for college students who don't necessarily have the means to pay for an expensive service.

Line Length

The way to combat the inaccuracy of the line length estimation is to give the app access to the website to enter a wait time, the time of order, and the message received when the food is ready. With all of these the app will be able to update the wait time of every dining hall ensuring that this information is as accurate as possible. However this issue will still persist if the students who are waiting in line don't also keep this information going into the website.

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5. Conclusion and Recommendations

With no other RIT apps available to help students know where the best places to eat are at any given time, *RIT Foodie* has them covered. Our team specializes in on-campus research to know what RIT students need most and this app will have serious time-saving benefits for students. Just the subtle convenience of what our app offers allows students to focus on what they *should* be thinking about: school! From the state-of-the-art AI or the elaborate customizability, this app has it all. Working with us will speed up development dramatically to help as many students as possible. We imagine it will take six more months of development to have everything ready for a successful launch and start helping RIT students this school year. Countless RIT students are waiting and only you can be the ones to help that become possible. Thank you for your consideration.

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6. Appendix

- ***All team members will edit this section.***
- Properly cite your sources!
- Additional data, charts, or research materials can be included here to support the proposal.