

Uber Global Hackathon

Coding, Practical AI

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THE PREMIER AR MENU
ARTIFICX



Introduction



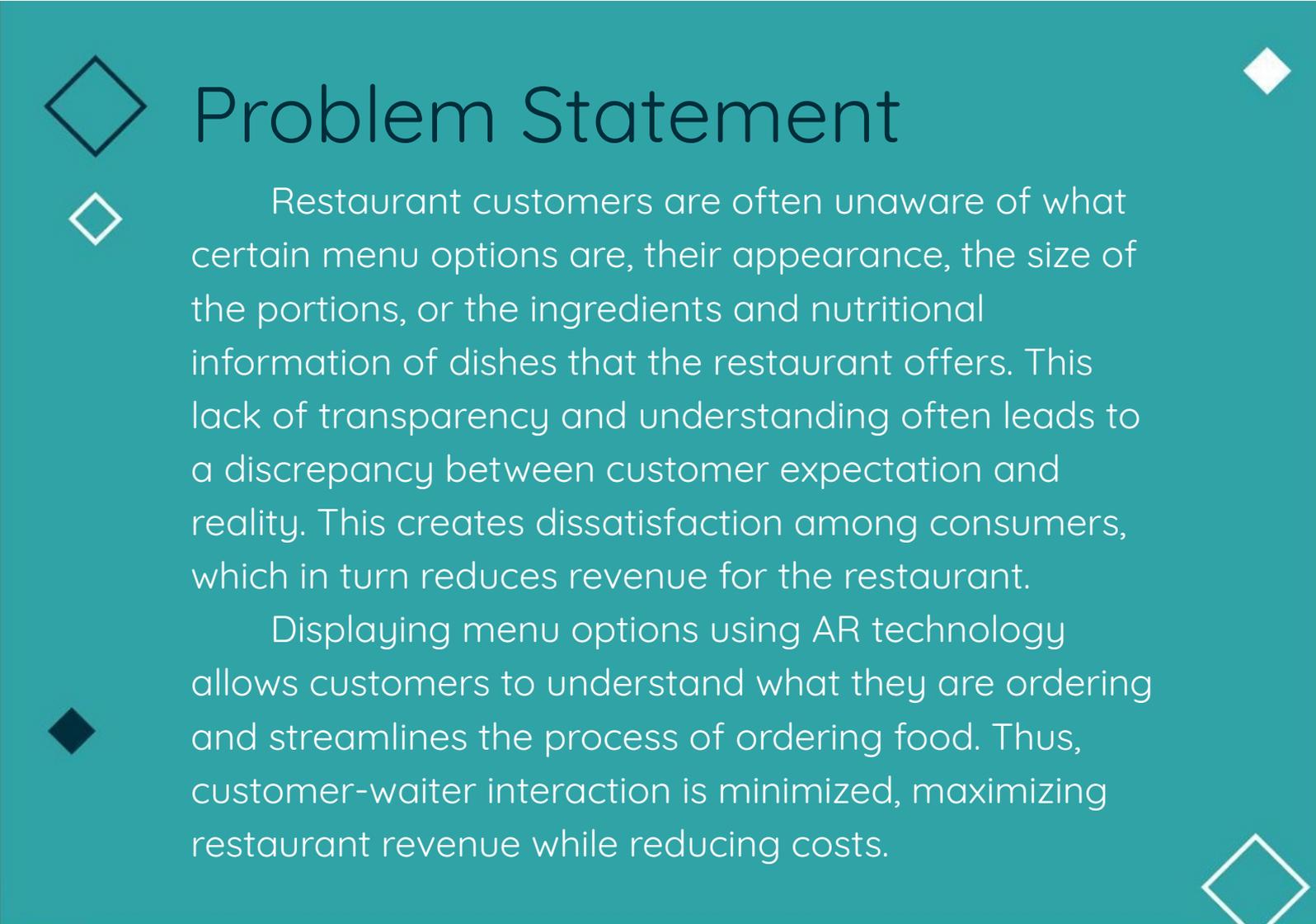
Artificx is a mobile software application with the goal of transforming and enhancing the common restaurant ordering experience, for owner and customer alike. Working with eateries around the world, our mission is to create an immersive way for customers to better visualize and understand menu items with accurate 3D portrayals using mobile AR technologies. AR or Augmented Reality provides an interactive experience that is enhanced by the usage of AI and other technologies, in this case, by creating lifelike 3D models of restaurant dishes that, when viewed through a device such as a phone, appear to be right in front of you.



Studies show that sentiment rises when customers are provided with images accompanying a menu item. Artificx creates a means for restaurants to better sell their products by providing a medium to market their dishes and increase customer satisfaction. Because restaurant customers are presented with a text-filled page covered in menu item names, occasionally accompanied by the stray image, consumers often struggle with knowing what exactly they are ordering. Information, from the size of the dish, to the appearance, or even ingredients and allergens, is omitted entirely. Rather than trying to guess from a flat and boring image, Artificx's 3D models of dishes, in combination with allergen and nutritional tags, allows for the consumer to know exactly what they are ordering, preventing any unhappy surprises or even possible allergen attacks.



Artificx is a novel implementation of AR and AI technologies, providing a seamless, safe, and integrated way for customers to visualize and order food, whether that be in the restaurant or from home.



Problem Statement

Restaurant customers are often unaware of what certain menu options are, their appearance, the size of the portions, or the ingredients and nutritional information of dishes that the restaurant offers. This lack of transparency and understanding often leads to a discrepancy between customer expectation and reality. This creates dissatisfaction among consumers, which in turn reduces revenue for the restaurant.

Displaying menu options using AR technology allows customers to understand what they are ordering and streamlines the process of ordering food. Thus, customer-waiter interaction is minimized, maximizing restaurant revenue while reducing costs.

Target Audience

This product appeals to both customers and restaurant owners. Usage of AR allows customers to understand what they are ordering and lets them visualize the sizes of the portions they order. An integrated menu allows for convenient access to information on potential allergens in addition to nutritional information. This understanding increases customer satisfaction, which is a success for all parties involved.

From the perspective of restaurants, Artificx offers several benefits. Of course, increasing customer satisfaction will lead to customer loyalty, increasing revenue in the long term. Also, allowing customers to see dishes they might order and ordering those dishes directly through the app greatly decreases the need for extensive customer-waiter interaction. This improves table turnover, which increases revenue, and decreases the number of waiters needed, reducing costs.

Industry Competition

Although there have been previous attempts at creating a similar product, none of them have been widely successful, many of the products formed, yet failed to be implemented successfully. This is because pre-existing competition lacks what Artificx has, a seamless and frictionless process for all sides, from restaurant owner to customer. Artificx provides a convenient platform for restaurant owners to scan dishes and import information entirely by themselves, as well as effortless access to the 3D models and information by consumers.

Current Status

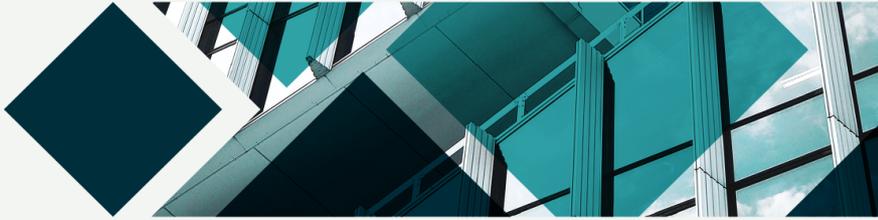
Research is complete, development is pending.

Ideal Outcome

We plan to create a functioning prototype of a mobile app that can eventually be installed through the iOS app store. Artificx will include a user-friendly way for restaurant owners to scan and create 3D models of dishes, then input nutritional and allergen information. It will also include e-commerce capabilities and provide a way for consumers to view relevant models and information, then order food.

Likelihood of Success

Given the research we have completed, what we've read within the documentation of APIs, and our pre-existing skills, we strongly believe that we have the resources and skills necessary to develop a functioning prototype within 48 hours.



Technologies & Software



[Apple ARKit](#)

ARKit is a software development kit that is implemented to facilitate the use of augmented development in iOS and macOS applications using artificial intelligence and other technologies. ARKit will provide the capability so that 3D models can be scanned and interacted with in this application.

[divante](#)

Divante is an open-source eCommerce software house with several available SDKs, including one for iOS development, which will be implemented in this project to enable food and drink ordering.



[Stripe iOS SDK](#)

Stripe is a financial services company primarily offering payment processing software and APIs for e-commerce websites and mobile applications. This app may use the Stripe iOS SDK to integrate payment processing options into the app.

[Xcode](#)

Xcode is an Apple IDE primarily for macOS used to develop software for macOS, iOS, and more. We plan to complete our development in Xcode.



[Swift](#)

Swift is a general use, open-source programming language developed by Apple. It is generally used for developing apps on Apple operating systems.

Links and References:

- Google Folder: <https://tinyurl.com/artificx>