

# **FINAL PROJECT PROPOSAL**

**PREPARED FOR**  
**COM S 3190 - Construction of User Interfaces**  
**Iowa State University Computer Science Department**

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# 1. Introduction

**Team Name:** MN\_2

**Team Members:**

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Brief background/experience with web dev

Name: Troy Powers

ISU Email: twpowers@iastate.edu

Brief background/experience with web dev

**Project Idea:**

We plan to continue our midterm project “Campus Eats” making it more refined and adding more features to make it more user-friendly.

## 2. Purpose of the Proposal

Project Objectives:

- Developing a user-friendly website with a minimalistic design.
- Providing information about the local restaurants and finding the best place to grab food, where people can compare the different prices
- Creating an easy-to-navigate interface for users to look at the menus for different restaurants.
- Incorporate a search feature where users can search for restaurants based on cuisine, location, and price range.
- One of the primary objectives is to consistently update the website to provide the latest information as new restaurants are introduced

Significance:

We believe in promoting local restaurants and providing people with new and exciting food experiences, and we want to create an interactive website that allows users to explore and try out something new.

## 3. Goals & Objectives

High-Level Goals

Build a functional, full-stack web application.

Practice minimal user-based UI/UX design.

Gain experience with React, Node.js, and database integration.

Add a smooth and straightforward user authentication

Complete initial UI wireframes and a basic React layout

Integrate a REST API backend

Implement all CRUD features with a connected database

## 4. Project Description

Project Overview:

Detailed explanation of what the application does, who the users are, and the overall flow.

Planned Pages & Functionalities:

Login Page

Signup Page

Home/Main View

Review Page

Search Page

Process Flow Page(s)

Confirmation Page

Technologies:

Frontend: React

Backend: Node.js with Express

Database: MongoDB

## 5. Project Path Selection

We plan on continuing our old project as we believe there is a lot of scope and room for improvement in how our app works and looks as well as the impact it has on allowing people to find new places to eat on campus and in Ames.

## 6. Feature Ownership & Responsibility

Login & Signup

Frontend in React, backend in Node.js/Express

CRUD

Search & Filter

Cart / Process Flow

## 7. Resources and Tools

Version Control: GitLab (primary)

Design/Wireframing: Figma, etc.

APIs/Libraries: Public APIs

## 8. File Structure and Project Organization

campuseats

    frontend/ - All react-related and frontend files

    src/

- assets/ - Contains all images and other assets
  - images/
- components/ - Contains all the react components
- css/ - Contains the global CSS styles for the project
- Other directories...
- public/
  - index.html
- backend/
  - routes/ –Endpoints for our API
  - controllers/ –logic for our endpoints
  - models/ –Models for our data
  - server.js –Entrypoint for backend app
  - .env –Stores database info/environment variables
- documents/
  - sketches/
  - finalReport
  - All other documents required for the project...

## 9. Data Sources and Management

Describe where your application data comes from (e.g., user input, third-party APIs, local seed data). Show sample data formats (e.g., JSON). Clearly explain how CRUD operations will be implemented and how data will flow through the system

```
{
  "RestaurantName": "El Azteca",
  "category": "Mexican",
  "rating": 4,
  "menu": [
    {
      "item": "Tortilla Soup",
      "description": "Shredded chicken with rice, pico de gallo & avocado. Served with our homemade fried tortillas",
      "price": "$9.25"
    },
    {
  ]
},
```

---

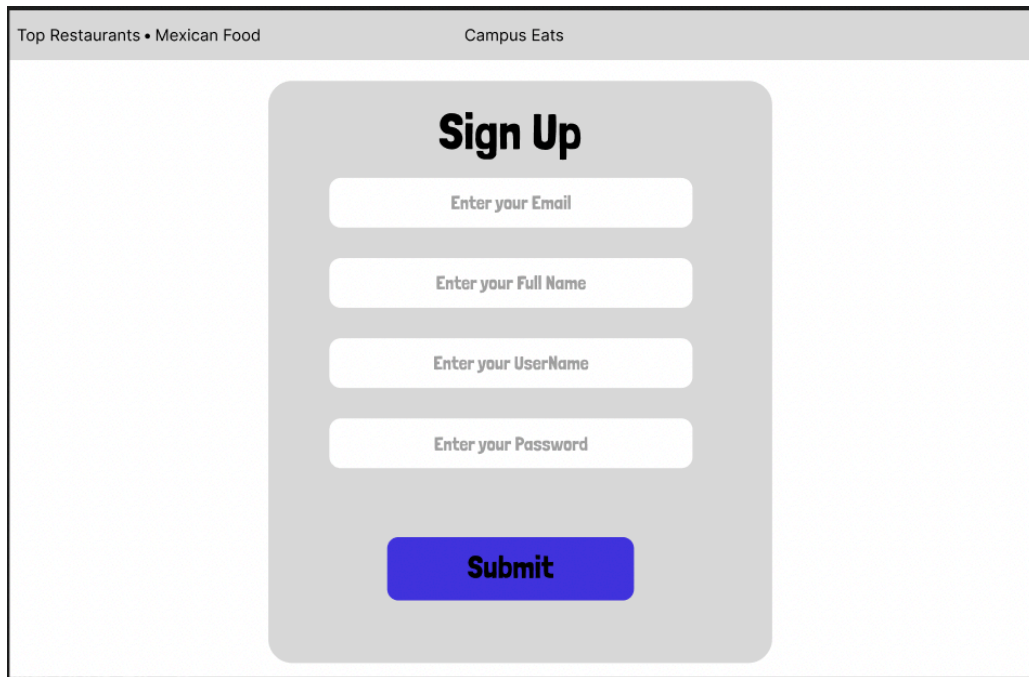
```

{
  "restaurantName": "El Azteca",
  "reviews": [
    {
      "userName": "Sarah J.",
      "rating": 4.5,
      "date": "2023-12-15",
      "comment": "The enchiladas were amazing! Authentic flavors and generous portions. The service
was friendly and quick. Will definitely be back!"
    },
  ]
},
{
  "Username": "twpowers",
  "Password": "iastate",
  "Reviews": [],
}

```

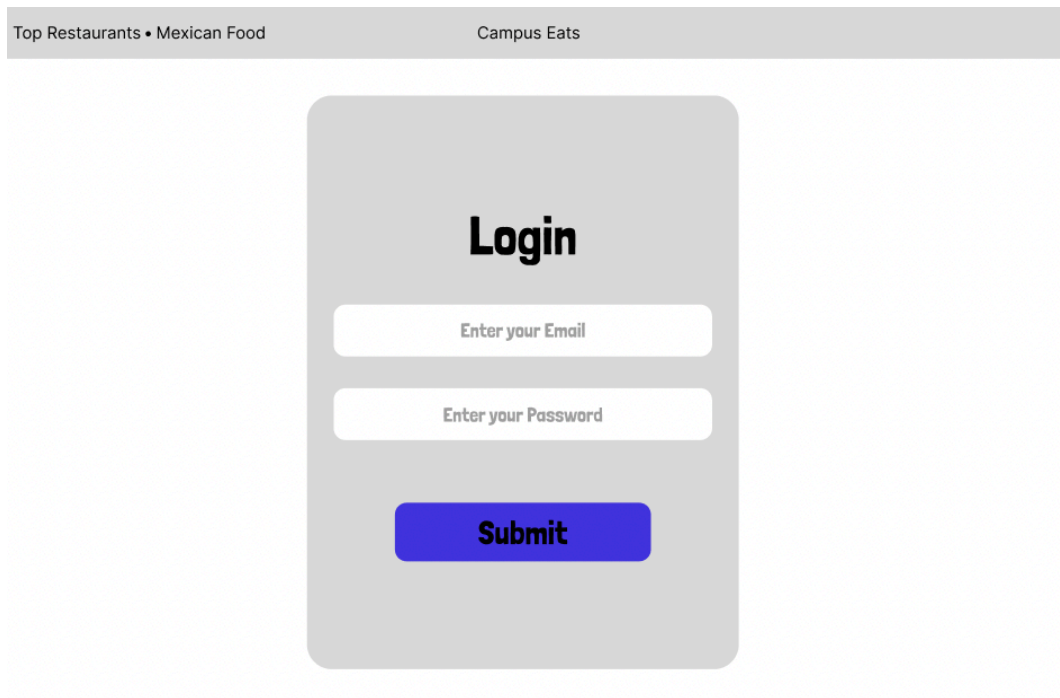
This is an example format for our restaurant, review, and user data will look like. Data will flow by first a user submitting information to the frontend, for example, a review form. Then the frontend will send a POST request to the backend for the data to be processed and then stored in our database. All data except restaurant information will be linked to a user. UPDATE and DELETE operations will be implemented to edit or remove information on restaurants or reviews

## 10. User Experience Views



The image shows a web page layout for a sign-up form. At the top, there is a navigation bar with two links: "Top Restaurants • Mexican Food" and "Campus Eats". Below the navigation bar, the main content area features a light gray rounded rectangle containing the sign-up form. The form has a title "Sign Up" in bold black text. Below the title are four input fields with placeholder text: "Enter your Email", "Enter your Full Name", "Enter your UserName", and "Enter your Password". At the bottom of the form is a blue "Submit" button with white text.

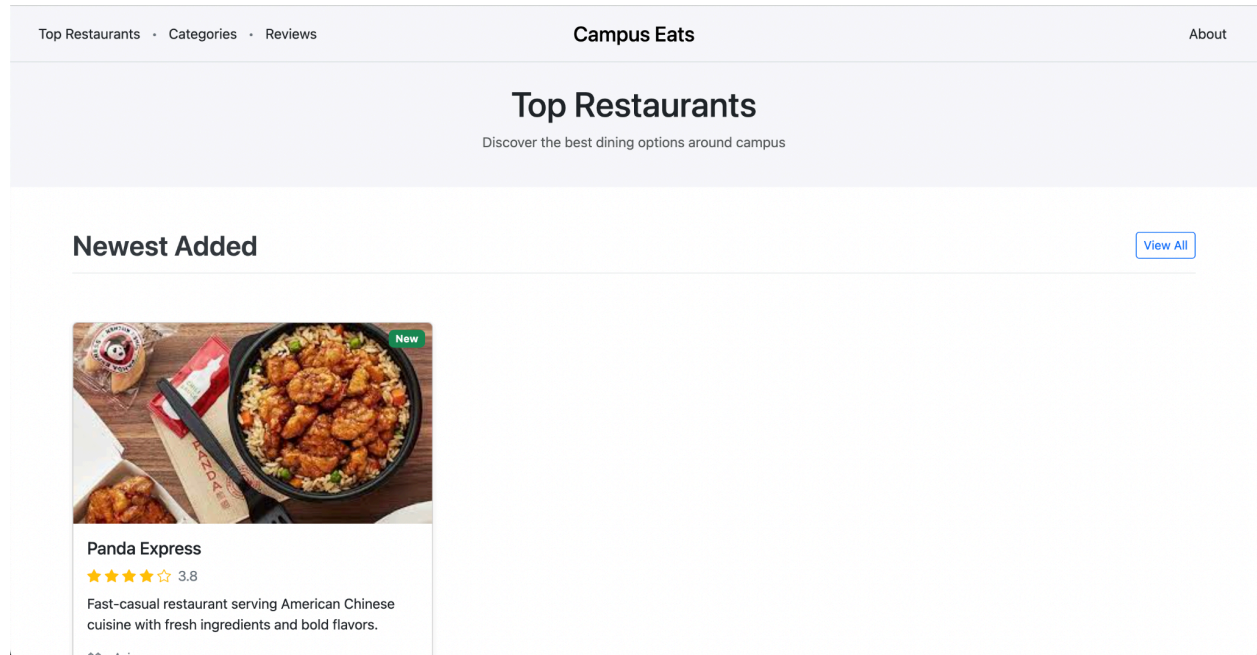
Sign Up Page - Users can sign up through this page allowing them to create accounts and access the site.



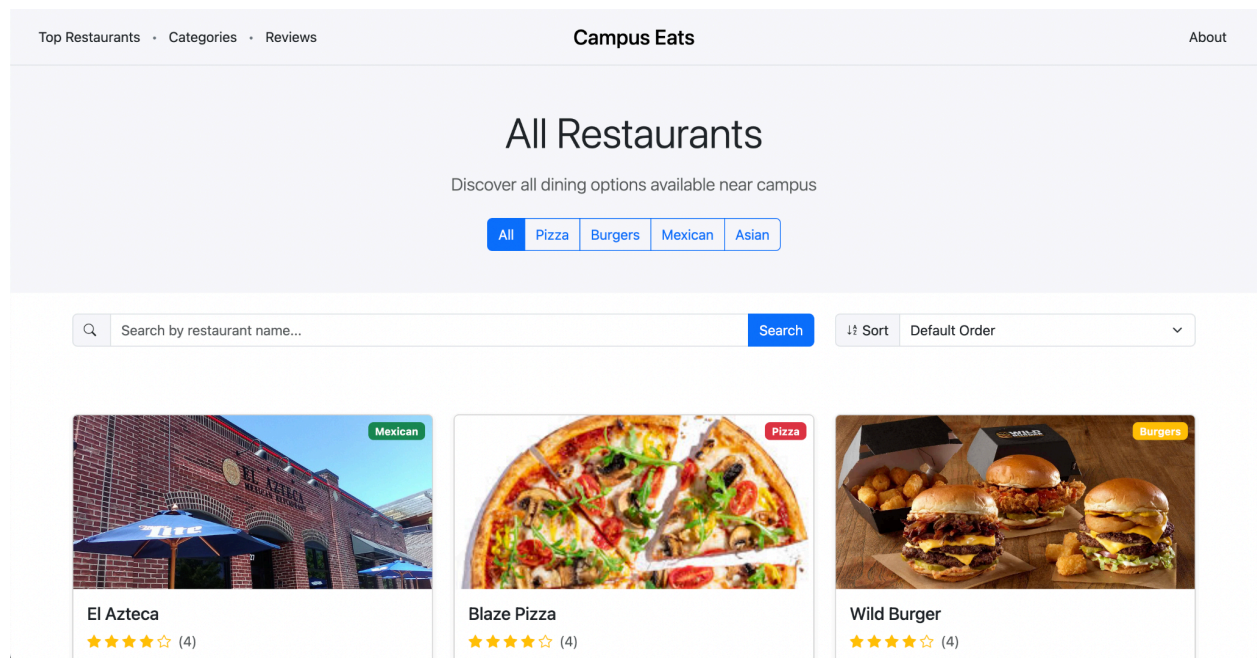
The image shows a web page layout for a login form. At the top, there is a navigation bar with two links: "Top Restaurants • Mexican Food" and "Campus Eats". Below the navigation bar, the main content area features a light gray rounded rectangle containing the login form. The form has a title "Login" in bold black text. Below the title are two input fields with placeholder text: "Enter your Email" and "Enter your Password". At the bottom of the form is a blue "Submit" button with white text.

Login Page - The user can log into the site through this page, allowing the user to access the home page, view the different restaurant options around, and write reviews.





Home Page - This is the landing page of the application where the users can see the most featured restaurants as well as recently added restaurants to the site.



All Restaurants Page - Users can view and filter all the restaurants based on their preferences and interests.

Top Restaurants · Categories · Reviews

Campus Eats

About

Restaurant Reviews

See what others are saying about campus dining options

Search reviews...

Q

Newest First

Write a Review

El Azteca

Write Review

View Restaurant

Sarah J.

December 14, 2023

★★★★★

The enchiladas were amazing! Authentic flavors and generous portions. The service was friendly and quick. Will definitely be back!

Mike T.

January 19, 2024

★★★★☆

Good food but the place was a bit crowded. Had to wait 20 minutes for a table. The tortilla soup was worth the wait though.

All Reviews Page - Users of this site can view all the different reviews of restaurants through this page as well as access the page to write reviews.

Top Restaurants · Categories · Reviews

Campus Eats

About

Write a Review

Share your dining experience with other students

Select Restaurant

Choose a restaurant...

Your Name

Rating

★★★★☆

Your Review

Tell us about your experience...

Cancel

Submit Review

Review Page - Users can write reviews for specific restaurants through this page.

## 11. Final Comments

Our project, “Campus Eats” is to use our interests in UI/UX and full-stack development to solve a practical campus problem: fast, convenient meal ordering and delivery. We aim to streamline food discovery and ordering. We plan to add features to search other campuses outside of Ames to make campus eats functional to other campuses and locations.

This is our proposal for Campus Eats. We believe this project will not only enhance our learning but also provide a valuable resource for food lovers everywhere.

Thank you for considering our proposal. We are open to suggestions.  
You can reach out to us at: [tanishv@iastate.edu](mailto:tanishv@iastate.edu) or [twpowers@iastate.edu](mailto:twpowers@iastate.edu)