

**MICHIGAN STATE**  

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**UNIVERSITY**

# Alpha Presentation

## Enhanced Shopping Experience Using AI

### The Capstone Experience

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*From Students...  
...to Professionals*

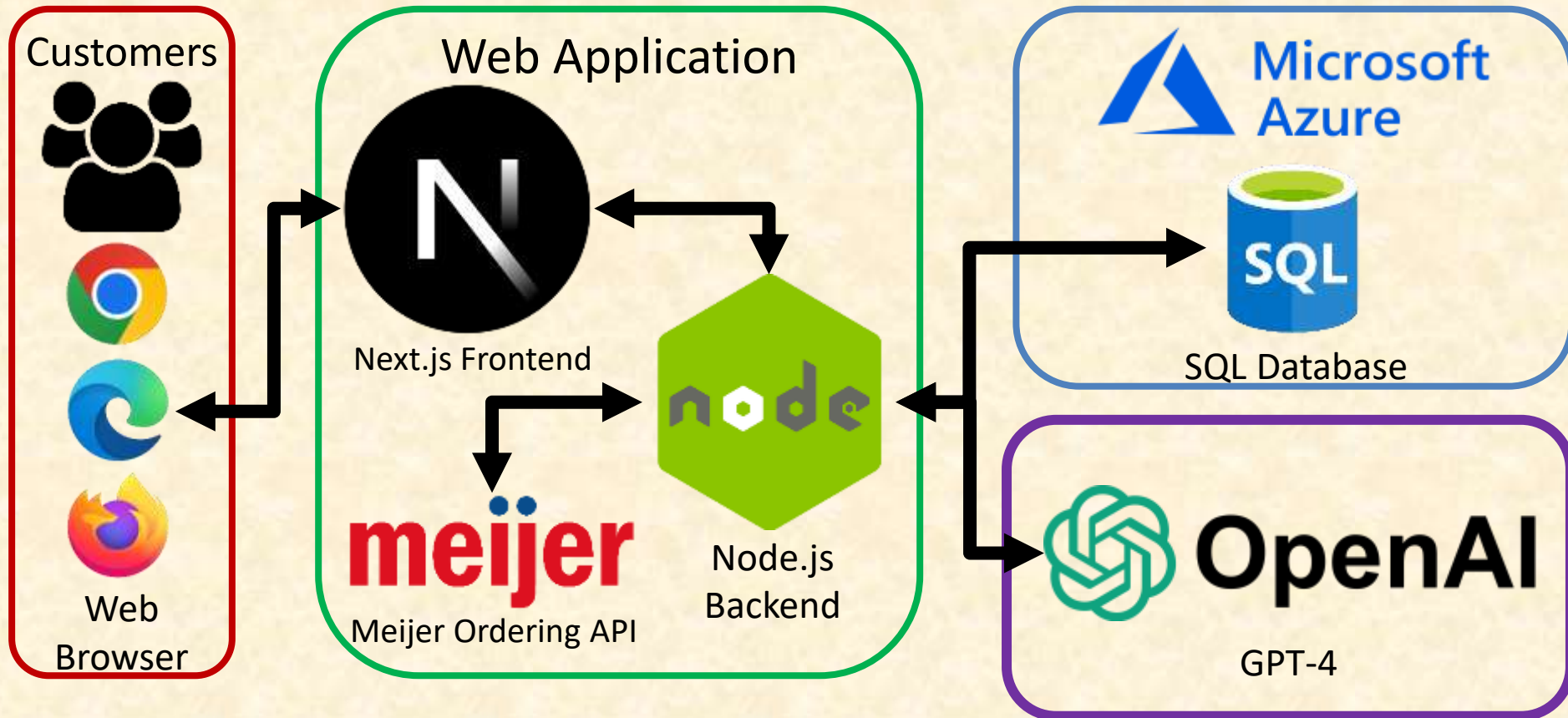
# Project Overview

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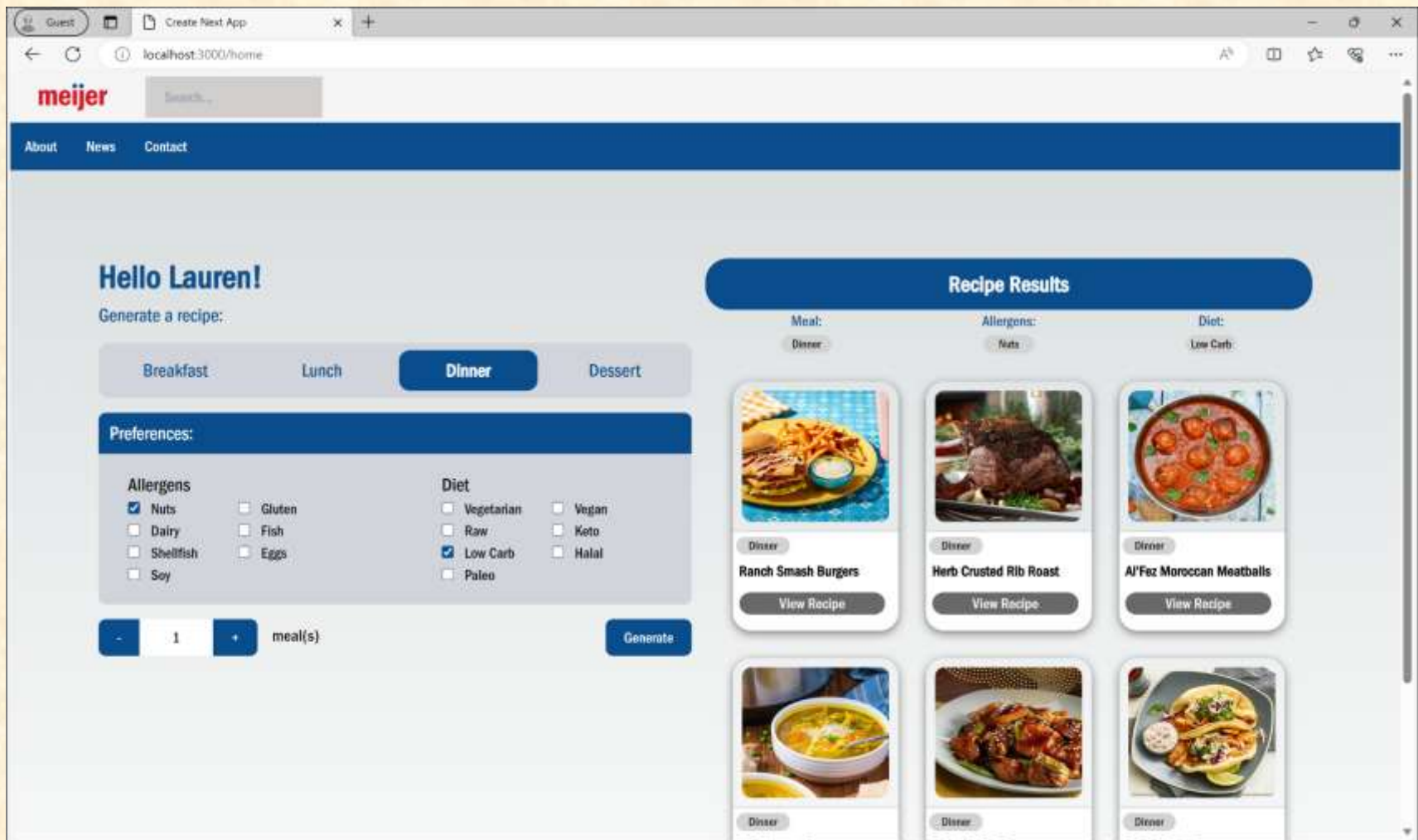
- Make it easier for customers to find recipes that they will like
- Create custom recipes based on dietary preferences and purchase history
- Contained in web application



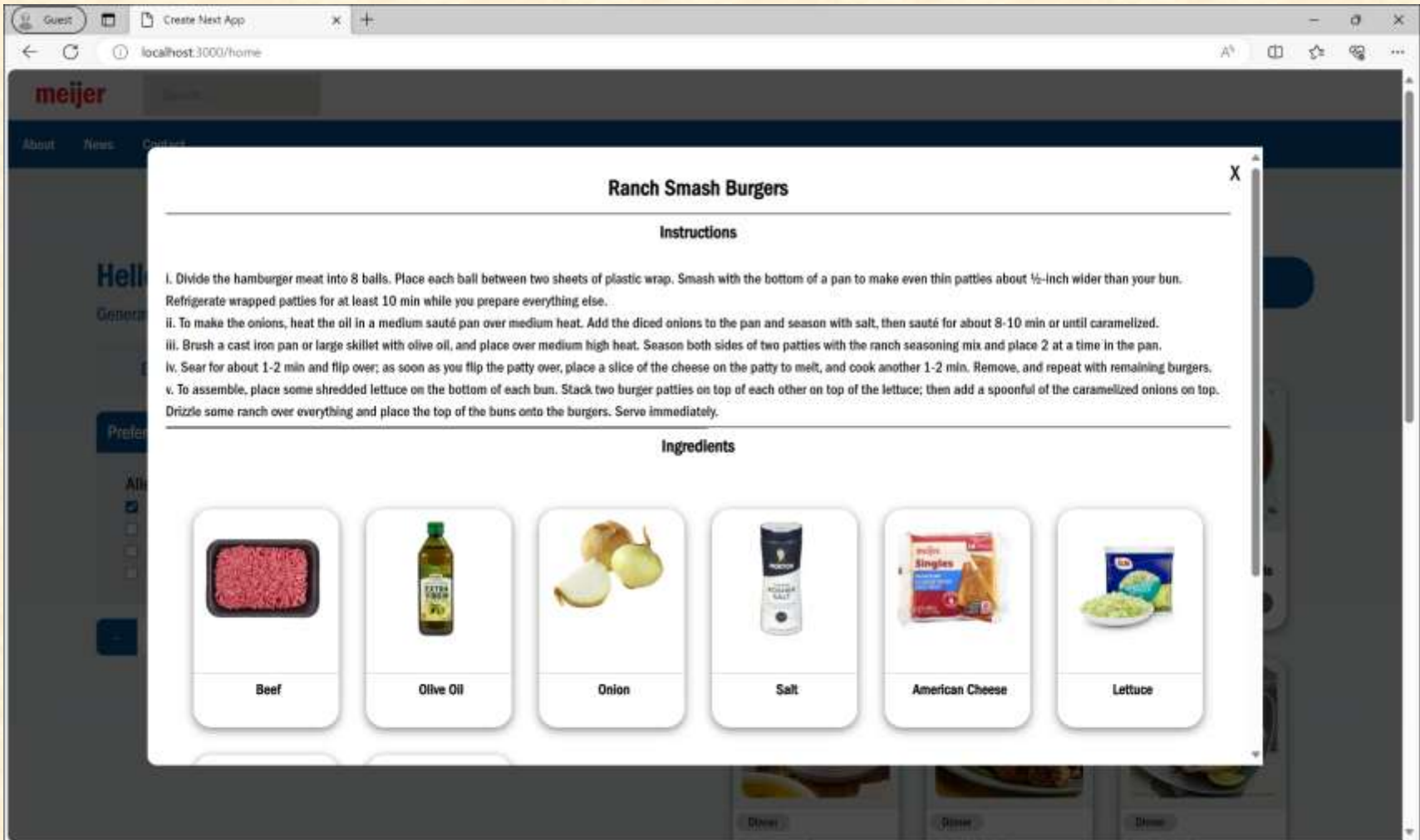
# System Architecture



# Home Screen after Recipe Generation



# Recipe Modal



# Recipe from GPT Output

localhost:3000 says

Recipe Name: Lemon Garlic Baked Salmon

Ingredients:

- 1 lb salmon fillet
- 2 cloves garlic, minced
- 1 lemon, sliced
- 2 tablespoons olive oil
- Salt and pepper to taste

Instructions:

OK

localhost:3000 says

Instructions:

1. Preheat the oven to 375°F (190°C).
2. Place the salmon fillet on a baking sheet lined with foil.
3. Drizzle olive oil over the salmon, ensuring it is evenly coated.
4. Sprinkle minced garlic evenly over the salmon.
5. Squeeze the juice of half a lemon over the salmon.
6. Season with salt and pepper to taste.
7. Place lemon slices on top of the salmon.
8. Bake in the preheated oven for about 15-20 minutes, or until the

OK



# Frequently Purchased Products and Image

```
PS C:\Users\zachg\Desktop\CSE 498\capstone_meijer> npm run sqlalpha
```

```
> meijer-next@0.1.0 sqlalpha  
> node ./sql/sqlalpha.js
```

```
Get the top 8 most frequent purchases from userID 2
```

```
429, 555, 1543, 1866, 2066, 496, 1018, 1725
```

```
Get me the names of the product related to the upid so I can tell GPT the product name
```

```
upid - product name
```

```
429 - Meijer 100% All Natural Boneless Skinless Chicken Breasts, Family Pack
```

```
555 - Fresh from Meijer Mild Italian Sausage Links, 19 oz
```

```
1543 - Meijer Shredded Mozzarella Cheese, 16 oz
```

```
1866 - Meijer Extra Virgin Olive Oil, 17 oz
```

```
2066 - Meijer Lasagna Pasta, 16 oz
```

```
496 - Meijer Restaurant Style Meatballs, 20 oz
```

```
1018 - Garlic, 1 lb
```

```
1725 - Meijer Spaghetti Pasta, 16 oz
```

```
Get the image (in base64 string) of the most frequently purchased product
```

```
iVBORw0KGgoAAAANSUhEUgAAAlgAAAJYCAyAAAC+ZpjcAAAAAXNSR0IArs4c6QAAIABJREFUeJzsvemWJLeRjXwNcI+IXGthVbFY...
```

```
Actual length of image base64 string is 308740 characters long
```

```
PS C:\Users\zachg\Desktop\CSE 498\capstone_meijer> █
```



# What's left to do?

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- Ordering API
- Saving recipes
- Increase efficiency
- User dashboard
- Update UI to match new prototype





# Questions?

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