

**MICHIGAN STATE**  

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**UNIVERSITY**

# Project Plan Presentation

## Employee Badge Image Validation Tool

The Capstone Experience

Team Amazon

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

# Project Sponsor Overview

- Founded by Jeff Bezos in 1994
- Started as an online book seller
- Based in Seattle, Washington
- eCommerce and cloud computing



# Project Functional Specifications

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- Badge image validation tool
- Optimizes time and resources to increase efficiency of new employee onboarding
  - Provides instant feedback on validation
- Currently a manual process that is overlooked by the badge team
- This tool will help improve the efficiency of the employee badge image validation



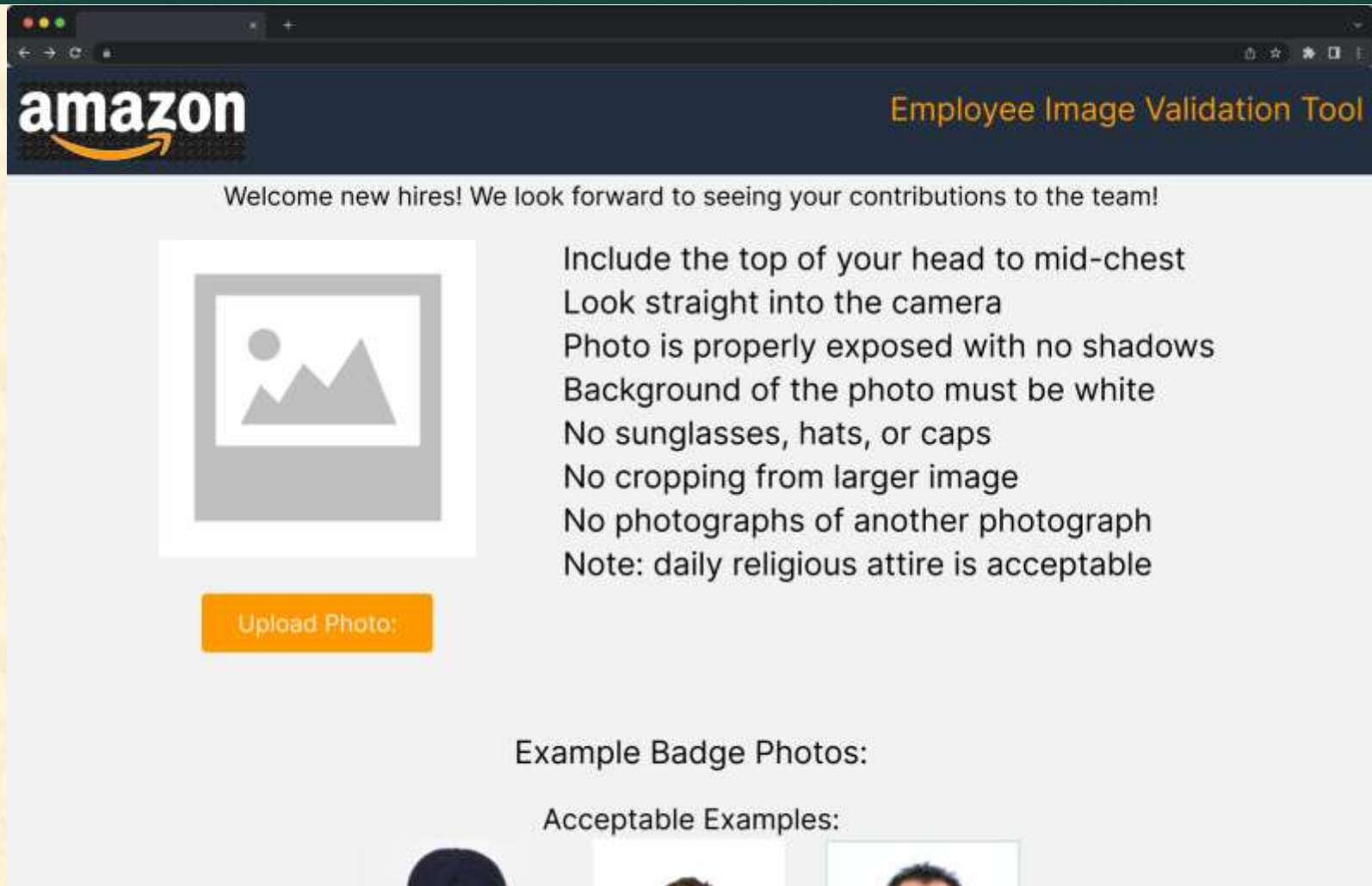
# Project Design Specifications

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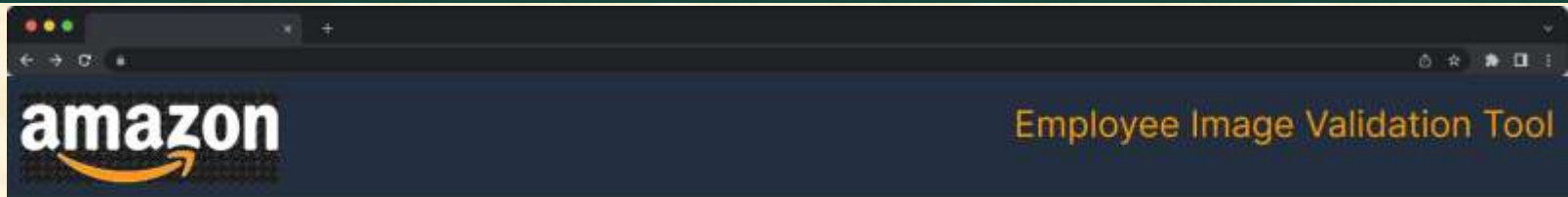
- Simple UI for new hires to upload proposed badge image
- Examples of good and bad photos
- User is able to see uploaded image
- Instant feedback for images
  - Responsive UI updates for photo criteria met



# Screen Mockup: Start Page



# Screen Mockup: Start Page (cont.)



Example Badge Photos:

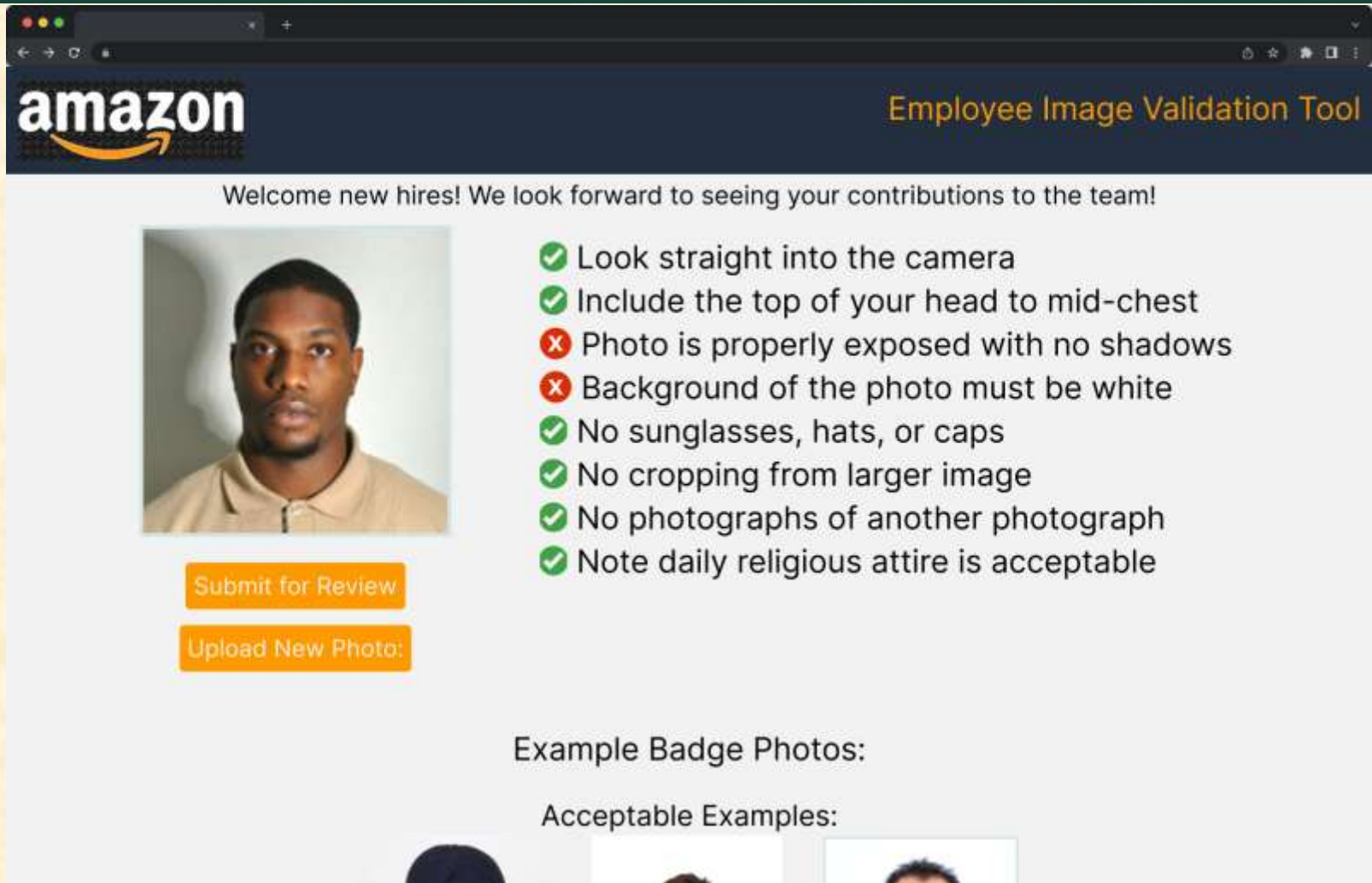
Acceptable Examples:



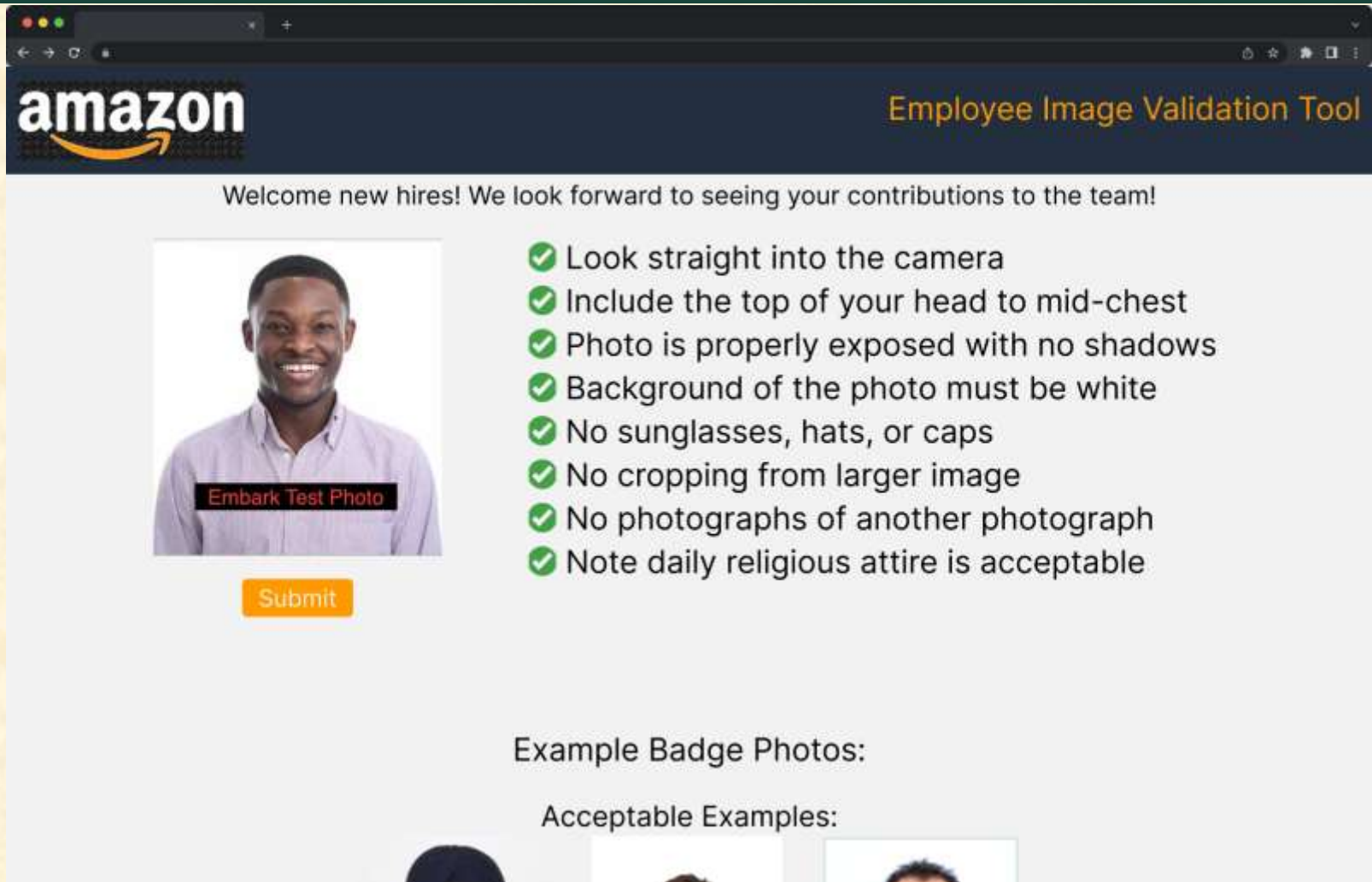
Unacceptable Examples:



# Screen Mockup: Rejected Photo




# Screen Mockup: Acceptable Photo



amazon

Employee Image Validation Tool

Welcome new hires! We look forward to seeing your contributions to the team!



Submit

- ✔ Look straight into the camera
- ✔ Include the top of your head to mid-chest
- ✔ Photo is properly exposed with no shadows
- ✔ Background of the photo must be white
- ✔ No sunglasses, hats, or caps
- ✔ No cropping from larger image
- ✔ No photographs of another photograph
- ✔ Note daily religious attire is acceptable

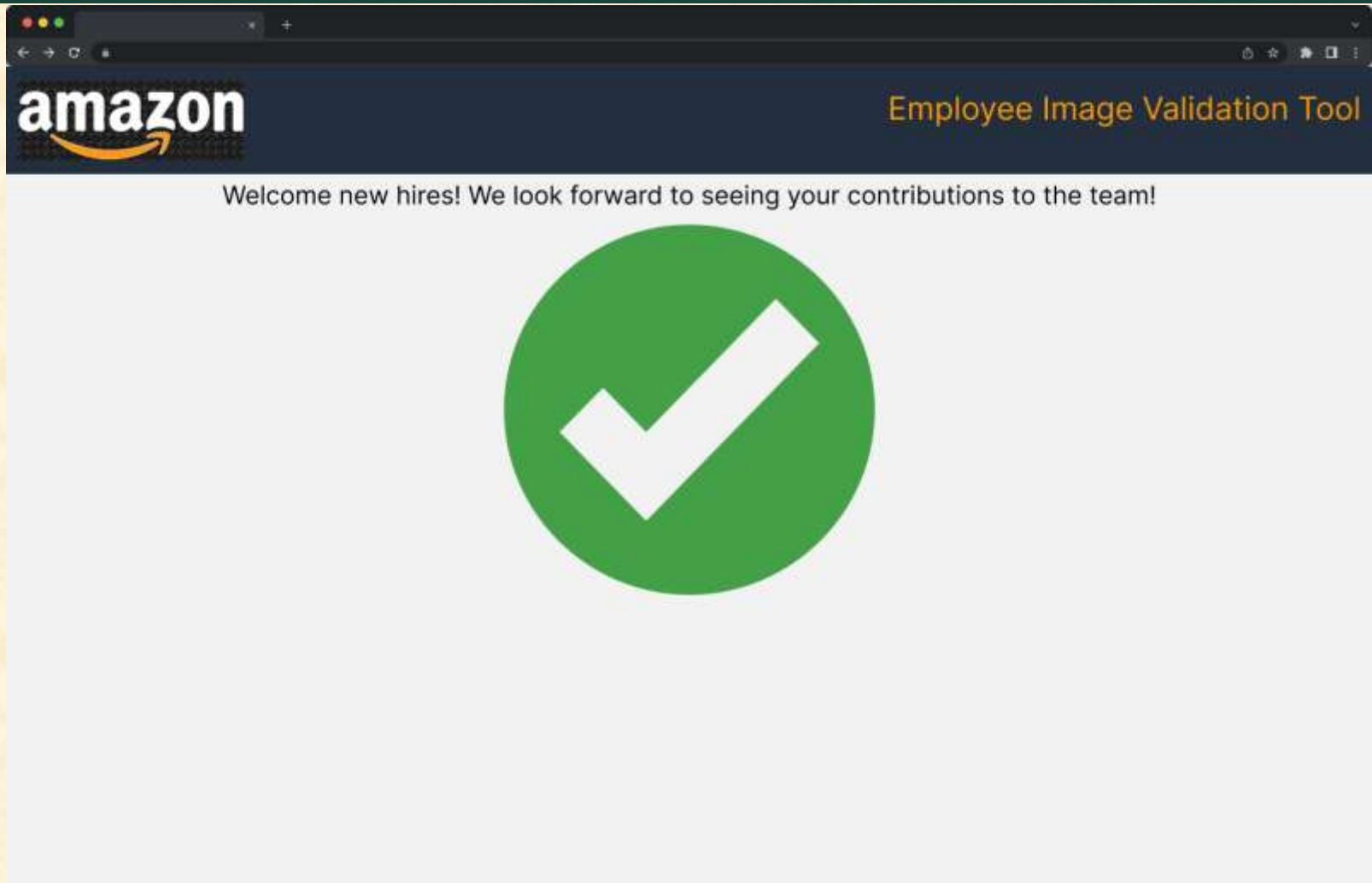
Example Badge Photos:

Acceptable Examples:





# Screen Mockup: Submitted Photo

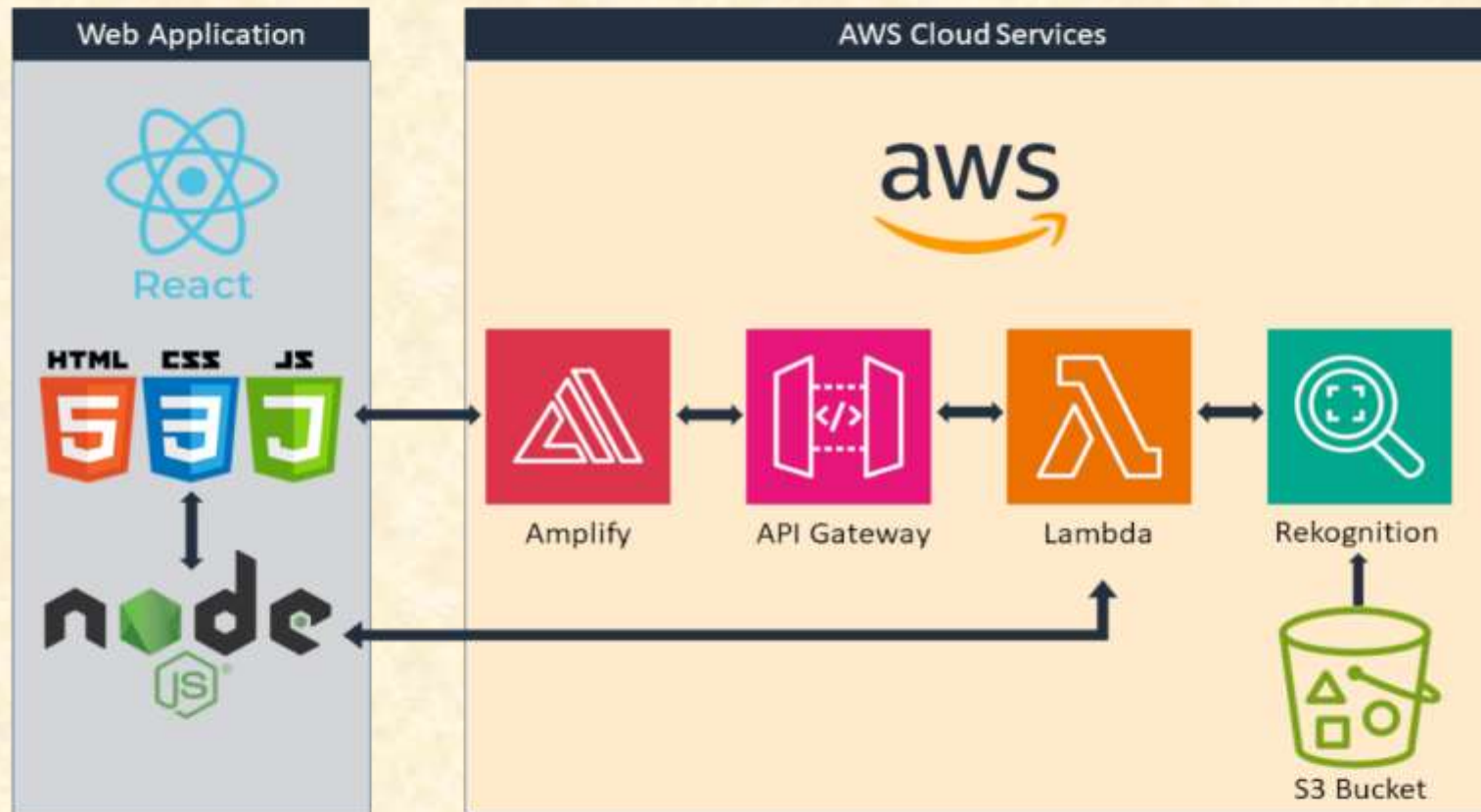


# Project Technical Specifications

- Frontend
  - React.js with HTML, CSS, JS
- Backend
  - Node.js
- AWS
  - Amplify
  - API Gateway
  - Lambda
  - Rekognition
  - S3 Bucket



# Project System Architecture



# Project System Components

- **Software Platforms / Technologies**
  - **Web Framework/Programming Language:**
    - React.js
    - Node.js
    - Python
  - **Development Environments**
    - VSCode
    - AWS management console



# Project Risks

- **Unfamiliar with AWS image recognition tools**
  - There are an abundance of AWS services, it was difficult to choose specific services for our project
  - We consulted with our sponsors and completed tutorials, creating small projects using the services to get familiar with AWS
- **Having a robust enough dataset**
  - We would like to have 95% confidence in our results
  - Collect data and fine tune our models according to confidence levels
- **Embedding our learning model into our project**
  - We are unsure about how we will implement our learning model from AWS into our web application
  - Trial and error based off previous experience and consulting with our sponsors



# Questions?

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