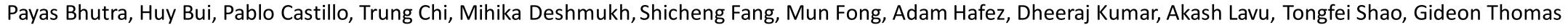


Development of Website

The Purdue Data Mine and Pebblst Corporate Partnership





Acknowledgments: We would like to thank our Corporate Partner Mentor, Samantha Billings, and our TA, Sujal Timilsina as without their guidance and support it would not have been possible to do this project.

Project Goal: Create website source code based off design requirements and integrate with Progressive Web App (PWA). This project will allow endusers to engage with Pebblst capabilities across web and mobile platforms.

About Pebblst

- Pebblst is a web platform where everyday people can share, save, and manage product and service recommendations. It is a consumer engagement and social network platform targeted at advancing meaningful and intentional product consumption
- It was founded by Samantha Billings
- The manifesto of Pebblst is "Consume with Intention" and the platform is designed to reflect that
- URL: https://www.pebblst.com/

Solution Overview

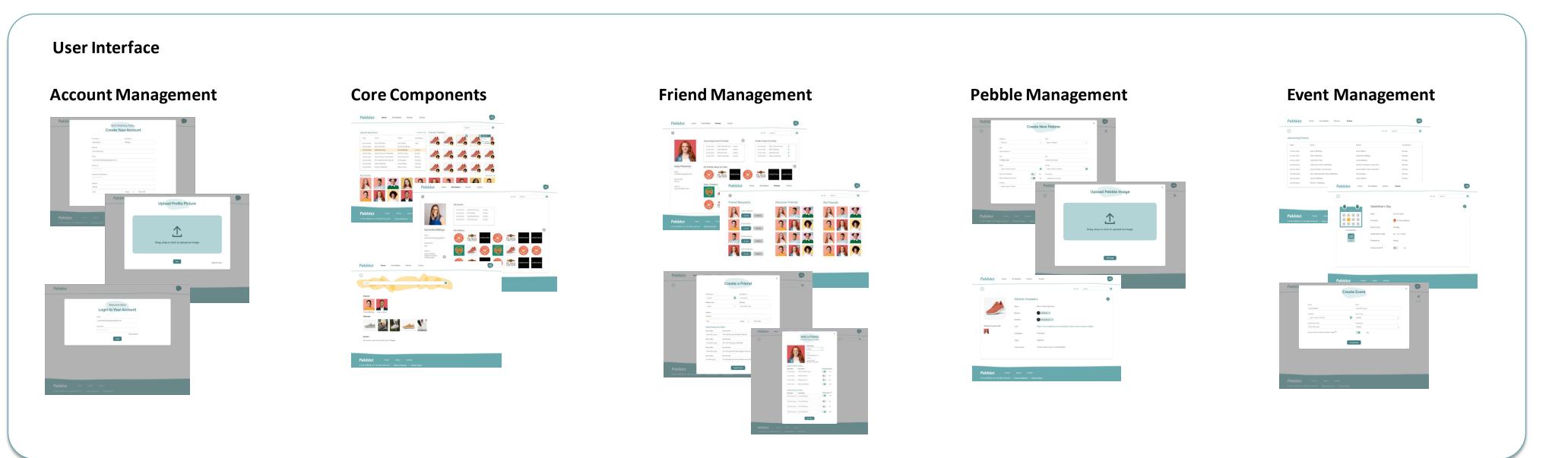
- Website created using Amazon Web Services (AWS) designed for displaying user profile alongside the upcoming events to get recommendations from friends
- Developed the frontend design for the website using React framework
- Followed the ERD diagrams to create a MySQL and AWS RDS database that stores all the data of the application
- The development of multiple AWS Lambda Functions to create an API for handling frontend to backend requests
- Conducted API testing using Postman ensuring efficient functionality of AWS Lambda Functions used for the website.
- Development of Lambda Functions to ensure encryption of personal user data.



Examples of Industry Standard tools utilized for the project:







Data Pipeline

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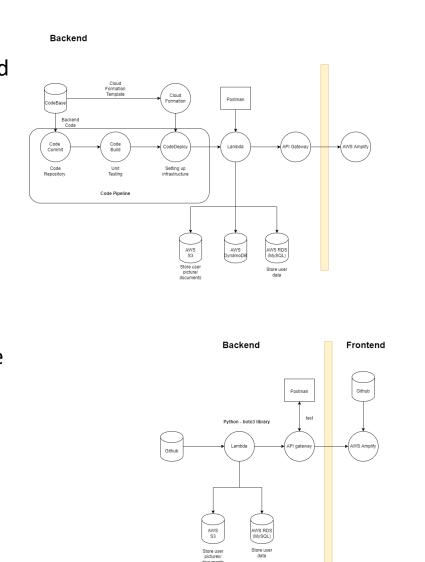
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NORDSTROM

- Data flows between the backend and frontend of the website through AWS Gateway
- To add, delete, or update data, the frontend of the website sends API Gateway requests to the backend
- The backend takes this data, and using AWS Lambda functions, the requests are handled, and the databases are updated accordingly
- The backend then returns a message to the frontend to confirm proper activity or send an error
- Postman is used to test Lambda functions through the sending of testing data through the AWS Gateway



Future Goals:

- Continue adding Lambda functions to complete the functionality of the website
- Improve the recommendation features of the website for pebbles, events, and friends
- Create a streamlined approach from various social media platforms to ingest and classify life events such as birthdays and anniversaries
- Create a repeatable, multi-site scraping service that gathers and stores delivery estimates based on recipient zip code and desired product
- Create streamlined functionality to add products as pebbles from various online sources including websites and email

Data Storage

- Most data is stored in a MySQL database that is hosted on AWS RDS
 - This includes:
 - User Profiles
 - Pebble
 - EventsFriends
 - Querying is done through AWS Lambda Functions written in Python using the SQLAlchemy library for SQL queries
- File data is stored in AWS S3 with paths stored in the MySQL database
- This includes:
 - Profile Pictures
 - Pebble Pictures
- Uploading and downloading files is done through AWS Lambda Functions written in Python using the Boto3 library, the software development kit (SDK) for AWS







Full Stack Development





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