Project Plan
Review Aggregator for Educational Programs

The Capstone Experience

Team Malleable Minds

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Customers are accustomed to using review aggregators when making buying decisions. We will utilize this familiar model to create a web app for parents making educational decisions for their children.

Features:
- Review aggregator
- General search capability
- User specific experience and reviews
  - Parent, Educator, and/or Provider
- Individual profile and program views
- Program likes, Educator following, personalized push notifications
Design Specifications

- Review aggregator web application that can be used on any web-enabled device (focus on PC and mobile internet browser compatibility)
- Search functionality to find a list of programs and look at a program’s details
- Navigate different pages with a hamburger menu icon
- Different account types with account-specific features
  - Parent - tailored home page, likes, follows, notifications, suggest edits on program details, individual reviews identifying as parent
  - Educator - same as parent, but individual reviews identifying as educator
  - Provider - add/edit/remove program information, cannot review but can respond to reviews on their programs
Screen Mockup: Home Page
Screen Mockup: Likes Page
Screen Mockup: Notifications Page
Screen Mockup: Following Page
Screen Mockup: Program Details Page
Screen Mockup: Reviews Page

Parent Rating
4.6 (87 Reviews)

Educator Rating

Reviews

Positively Engaged Child
Safe
Value
Recommend to Others

Absolutely incredible program that my son in 5th grade went through. After the camp was over, it was all he talked about for the next month! His grades in class have started going up and I couldn’t be more happy with DAPCEP. Thank you for giving my son such an unforgettable summer!

Rebecca Hennings
August 2020

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Cody Carter
September 2020
Technical Specifications

• Web-based application deployed and hosted through Amazon Web Services
  ▪ Designed for Mobile and PC Browsers
• Leverages a Flask framework that connects the Python-based backend to the React-based frontend with the use of a RESTful API
• PostgreSQL database schema deployed through Amazon RDS
  ▪ Accessed in backend using SQLAlchemy Library
• User Authentication verified through Okta
  ▪ Also allows for unauthenticated “public” access
• ElasticSearch implemented in the backend for search and filtering capabilities
System Architecture

Clients

User Authentication

Web Server - Amazon Elastic Beanstalk

Backend

Python

Flask

elasticsearch

SQLAlchemy

Frontend

React

JavaScript

Version Control

git

RDS

Amazon RDS

PostgreSQL

okta
System Components

• Cloud Platforms
  ▪ Amazon Web Services
    o Amazon Elastic Beanstalk – Web Server
    o Amazon Relational Database System

• Software Technologies
  ▪ Frontend: React, JavaScript, Okta
  ▪ Backend: Python, SQLAlchemy, ElasticSearch
  ▪ Version Control: Git, SourceTree
  ▪ Development Environment: PyCharm, Visual Studio
Risks

• Customizing Content for Multiple Children
  ▪ Need to determine how to best present information to a parent with multiple children of varying ages
  ▪ We will design a highly customizable experience with user filtering

• Efficient Database Storage and Query Design
  ▪ As the app scales it will likely degrade performance, and database structural changes will be difficult once real users are involved
  ▪ We will build in stress testing components with design as we go

• Evolving Project Requirements and Scope
  ▪ We are building quickly and iteratively from the ground up, and when faced with unknowns we must rework and add new components
  ▪ As we re-scope we will discuss what items must go out-of-scope in favor of reworking and replacing current features

• Initial Program Information
  ▪ Database information will initially come from CEO, and we will not have data as we build to test our frontend/backend
  ▪ We will work with CEO to nail down data fields well in advance and develop an automated process to upload data sets as they are delivered. We will also curate a dummy data set for testing purposes
Questions?