Samuel Aaron McKay

Software Engineer

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Summary

A creative and passionate software developer who is a recent graduate of Colorado State University with a Bachelor of Science in Computer Science. Shows a vested interest in web development and most recently offensive cybersecurity.

Education

Colorado State University, Fort Collins, CO **August 2019 – May 23**

Bachelor of Science – Computer Science

- GPA: 3.72

Core Competencies

Languages:

- JavaScript/TS
- Java
- Python
- C++
- C#
- C
- Bash
- R

Skills:

- OOP
- UI / UX
- Debugging
- Databases
- Data Collection
- HTML 5
- Full Stack
- Graphic Design
- Microsoft Word, Excel, PowerPoint
- Research
- Experimentation
- Programming
- APIs
- Planning
- Problem Solving
- Creativity
- Organization
- React.js
- Linux
- MATLAB
- Front-End
- Back-End
- Testing
- Development
- Software Engineering
- Fuel

Projects

Gone Fishing

A personal project featuring a front end with three cards displaying cartoon frogs. A backend system flips these cards based on received emails to a specific address or, alternatively, found Bitbucket requests. These Bitbucket requests are placed by an integrated Amazon Alexa skill which uses AWS Lambda to update Bitbucket and initiate card flips.

Bidder, Faster, Stronger

A responsive webpage using React.js was designed and created which functions as a bidding platform for hand drawn and minted NFTs. This website currently uses Ganache to manage the connection between a testing account and the website as well as make function calls to the smart contract written in Solidity.

Tower Defense

Using the Unreal game engine, a virtual reality tower-defense game was created. In this game enemies, with a naïve AI, spawn at the base of the tower. Players are tasked with defeating these enemies by using a variety of guns. When an enemy is defeated, the player receives gold to upgrade their tower to better defend it from the increasing difficulty and number of enemies.

Company Management

During a team-based project, Agile methodologies were used to create a backend in Java using Object Oriented Programming and a limited front end in React.js. To test the methods

and functions Junit as well as the automated testing suites Randoop, Evosuite, Pmd, spotbugs, and Ekstazi were utilized.

Crypto Bot

Within a team of three people, a system was developed that automatically purchased and sold cryptocurrencies. By using a Raspberry Pi, Binanace US's API, and multithreading the team was able to create a system that allows the user to "set it and forget it" and make passive income.

GeoPursuit

Within this group project, a React.js web application was created to determine if there was a significant difference between an interactive learning modality and a non-interactive modality when learning the outlines of countries in Africa.

Trip Planner

Using Agile methodologies this team developed a website in which a user could make, plan, and save a trip. Periodically, team members would be designated as the "scrum master" and assume the responsibilities therein. The front end was developed in React.js with styling done in CSS, and the back end was developed in Java.

Music Classification

Utilizing several Python libraries to instantiate and train a machine learning algorithm, the algorithm was able to classify a sample of 20000 songs. Through varying features present within the data, a support vector machine and a random forest classifier were capable of classifying music with a higher accuracy than random guessing allowed.

Experience

Kohl's, Fort Collins, CO **2020 - 21**

Sales Associate

- Exhibited problem-solving capabilities.
- Developed effective time management skills.
- Fostered teamwork between coworkers.

Domino's, Littleton, CO **2018 - 18**

Food Service Worker

- Completed managerial tasks to alleviate the consequences of short staffing.
- Facilitated communication between front-end and back-end teams.

Sweet Tomatoes, Littleton, CO **2018 - 18**

Food Service Worker

- Provided quality assurance testing to ensure a consistent product.
- Maintained a clean working environment to facilitate an effective workflow.

Domino's, Littleton, CO **2017 - 17**

Customer Service Liaison

- Facilitated communication between front-end and back-end teams.
- Completed responsibilities in a timely and effective manner

Additional Information

- **Personal Interests**: Avid reader, musician, artist, weightlifter
- **Cultural Experiences:** Traveled to five cities in Japan for an eleven-day vacation.