Adam Ebrahim

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Education

Duke University, Durham, NC   August 2021 – Current (Expected May 2024)
A. James Clark Scholar
- Majors: *BSE in Electrical and Computer Engineering, Double Major in Computer Science* (GPA: 4.0)
- Course Work: Data Structures & Algorithms, Computer Architecture, Design/Analysis of Algorithms, Signals & Systems

Work Experience

Duke University Code+   May 2022 – July 2022
Full-Stack Software Engineer Intern
- Developed a web application for Duke University to enable students to more easily build their class schedules for future semesters while being able to visualize relevant data.
- Created RESTful backend API to allow users' book bagged courses and custom schedule features to be stored in a database for future accessing.
- Designed relational database table structure to hold user data and course information.
- Automated processes for parsing XML files containing class information and inserting/updating them into database to ensure courses are up to date.
- Increased speed of building schedules through user-friendly website design.
- Utilized React.js for the frontend, with a Ruby on Rails backend REST API and PostgreSQL database.

Projects/Activities

Game Development
- Worked on developing a Jeopardy-style trivia game on the online platform Roblox using the programming language Lua.
- Learned about client-server models in game development.
- Created reusable module for smoother camera rotations and paths during cutscenes using mathematical concepts such as spline interpolation.

Workout Generator Website
- Developing a web application to generate custom, weekly workout routines based on user-input settings.
- Built a RESTful backend API using Go to access exercise info stored in a database.
- Created backend logic to return an individualized weekly workout plan utilizing exercises from the database with generated sets/reps, rest times, and more.
- Implemented Redux library to store state globally in the frontend, allowing easier access of the data.
- Utilized CI/CD pipelines to automatically ensure the app functions smoothly in development and production environments.
- Deployed app through Heroku with a React/Redux frontend, Golang backend, and Postgres database.

Arduino Robot
- Used an Arduino microcontroller and other electrical components to build a functioning robot that could perform line following, object detection, color sensing, and communication with other robots.
- Discovered best practices for writing efficient Arduino code and for wiring/working with sensors.

Skills

- **Languages**: Java, Go, C, JavaScript, Lua, Ruby, SQL, HTML, CSS
- **Frameworks/technologies**: Git, React, Redux, Arduino, TensorFlow, Ruby on Rails, PostgreSQL