Abu Abukar

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EDUCATION

M.Eng. Computer Science & Engineering   Expected May 2023
- University of Louisville
- Relevant Coursework: Distributed System Design, Parallel Programming, Combinatorial Optimization

B.S. Computer Science & Engineering   May 2022
- University of Louisville, GPA 3.64/4.00

Organizations and Awards: National Society Of Black Engineers (NSBE), Porter Scholar, Dean's List

RELEVANT EXPERIENCE

Computer Engineer Co-op   January – May 2020 | August - December 2020 | May - August 2021
Midea Research & Design Center   Louisville, Kentucky
- Contributed to an ongoing smart appliance project using C++, which led to the filing of four patents
- Developed a first in industry laundry color detection routine using OpenCV (C++), which accommodates the proper wash temperature and wash cycle and adjusts for various types of ambient lighting conditions
- Collaborated with industrial design to design and implement an appliance touch user interface using Qt (C++)
- Collected and annotated 200 image dataset to train a U-Net model to predict masks for laundry in an image
- Wrote sensor control programs for Cortex-M3 and ATmega328P microcontrollers in C, and gathered testing results to analyze the application of each sensor

PROJECTS

Capstone Project   January – May 2022
TheRealSeat
- Collaborated with a company capstone partner using agile methodology to create an event ticketing website
- Developed front-end for events listing page using React JS and React Bootstrap, with Redux to store global data
- Implemented Axios to send asynchronous HTTP requests to REST endpoints for events listing data
- Built serverless APIs to store events and user transactions using DynamoDB, Lamda (Python), API Gateway, and configured using AWS SAM
- Established CloudFront distribution using AWS SAM template to route user requests to a custom domain name

Pikup   January – April 2022
- Developed a mobile app that allows users to find, join, and post recreational activities
- Implemented many-to-many relationship of users and activities using Java Persistence API
- Contributed in Java back-end using Spring Boot to develop RESTful endpoint that allow users to join or be removed from an activity inside of a MySQL database
- Built CI/CD pipeline using GitHub Actions to continuously test and deploy spring-boot backend to Heroku

Ext2 File System Tool   December 2021
- Developed a file system analysis tool in C that analyzes partitions formatted with the Ext2 linux kernel file system
- Displayed information about an inputed disk image, such as free inode IDs and root directory entries
- Utilized valgrind for memory debugging

Course Agenda App   December 2021
- Created an android app in Java that lets users to save their courses, upcoming deadlines, and use a grade calculator
- Built CRUD operations for a SQLite database to manipulate data about a user's courses and upcoming deadlines

SKILLS

Languages: Python, Java, C, C++, Javascript, HTML, CSS, SQL

Technologies & Frameworks: React JS, React Bootstrap, AWS Lambda, SAM, DynamoDB