McKenna Corn

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Education

North Carolina State University Raleigh, NC

Bachelor of Science in Computer Science, Minor in Cognitive Science *Aug 2020 – May 2024*

Leadership: Project Research Team Lead for Engineers Without Borders North Carolina Projects (EWB-NCP)

Projects

Driver Owl | *JavaScript, React Native, Redux, Node.js, HTML/CSS, SQL, Docker, Git* Spring 2024

- Developed and implemented the onboarding process for the Driver Owl mobile app using React Native and Redux, utilizing a sliding page feature to create a seamless and user-friendly experience for volunteer drivers, ensuring a clear and intuitive registration flow
- Integrated back-end development for the ride request feature in the Vote Owl app using Node.js and MySQL, enabling users to easily request free rides to polling stations
- Created detailed design documents, including high/low-level designs, architecture, sequence, and use case diagrams
- Conducted extensive testing and validation of the ride-sharing and onboarding features using Mocha and Chai

CoffeeMaker Frontend | *JavaScipt, Java, SQL, HTML/CSS, AngularJS, Maven, Git* Spring 2023

- Engineered a secure web application using AngularJS, Bootstrap, Java, Hibernate, and REST API, ensuring a seamless and responsive user experience to simulate a beverage ordering system
- Spearheaded frontend development that implemented backend features such as streamlining customer orders, recipe management, and inventory oversight through the implementation of role-based access control
- Optimized data management through MySQL, ensuring secure storage and efficient data handling, transforming cafe management into an intuitive platform

Compression Manager | *C* Fall 2022

- Developed Compression Manager using VSCode, allowing users to efficiently compress and decompress text files in Java, optimizing storage and readability
- Introduced a novel word-to-number mapping system, assigning sequential numbers to the first occurrence of each word and subsequently replacing repeated occurrences with their respective numbers, resulting in reduced file size
- Designed a robust compression algorithm leveraging the Map ADT and sorting algorithms to construct a word database. Implemented a map to achieve optimal runtime for compression, and move-to-front heuristic for decompression

Pseudocode Interpreter | *C* Fall 2022

- Developed a holistic pseudocode interpreter using VSCode, capable of parsing input program text files, executing program logic, and presenting results or error messages to users
- Implemented advanced abstraction techniques, creating a structured parse tree of objects utilizing various structs to effectively manage values, sequences, and the compilation environment
- Utilized a combination of low-level functions to tokenize input text into expressions and statements, streamlining the parsing and interpretation process through higher-level functions

Experience

Computer Science Instructor May 2019 – Aug 2021

Code Ninjas *Charlotte, NC*

- Refined and augmented a unique teaching curriculum focused on computer science and programming for children aged 7-14
- Mentored and tutored young learners in a range of programming languages, including Scratch, JavaScript, Lua, and C# through Unity
- Facilitated hands-on STEM projects, such as game development, web design, and 3D printing
- Managed daily operations, fostering a productive learning environment, and facilitating effective communication between students and parents

Technical Skills

Languages: Java, JavaScript, Python, SQL, C/C++, HTML/CSS, C#, R, Matlab
Frameworks: React, Redux, Node.js, Spring Boot, AngularJS, Mocha, Chai, JUnit, Jenkins
Developer Tools: Git, Docker, REST, VS Code, MySQL, Eclipse, Figma, AutoCAD, PrusaSlicer