Kavin Suraj Jeyasankar

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Education

Bachelor of Science **Colorado School of Mines** **Golden, CO, USA** **08/2021-12/2024**

- Major: Computer Science Focus Area: Computer Engineering GPA: 3.52

Experience

Software Engineering Intern **Charles Schwab** **06/2024 – Current**

- Built a web application designed to efficiently choose the proper delivering service for notifications on all Charles Schwab applications with Angular, improving the user experience of millions of people.
- Redesigned applications to incorporate a more modern design and improve user interfaces to extend the lifetime of existing software.
- Collaborated in daily scrum meetings with people of many backgrounds to ensure sprint tasks would be completed on time.

Undergraduate Software Engineer Researcher **The Center for Hydrate Research** **08/2023 – 05/2024**

- Designed and modernized one-of-a-kind software used to predict stability of hydrates in nature using the latest technologies available with C++ version 20.
- Significantly optimized existing software through the integration of new C++ versions to bring runtimes from 1 hour on older versions down to 4 seconds.
- Improved software readability and modularity for the implementation of future features.
- Continuous code reviews, professional benchmarking/unit testing frameworks, compile time evaluations leveraged to produce optimal results for industry success.

Projects

AI Board Game (~7000 lines) - Java

- Designed and developed Clue board game with clean and complete UI as well as clean and modular code with the implementation of OOP principles and SOLID programming principles.
- Used JFrame to implement graphics, movement animations and button functionality.
- Created artificially intelligent computer players to make smart decisions derived from human players movement, accusations, and suggestions.
- Implemented Junit to ensure functionality of the code throughout the development process. OOP and SOLID programming principles were utilized for object-oriented design.

Parallel ZIP (~500 lines) – C

- Program inputs a large string and outputs a compact version of the same string with character counts with the utilization of multiple threads to improve efficiency.
- Array was split into equal parts with each part being processed in parallel with different threads to ensure performance standards are met.
- Memory allocation and deallocation was strictly kept track of to ensure memory safety when creating and accessing arrays in C.

Fullstack AI Powered Quiz Creator – Python

- Utilized openai API, python, and flask to create a web application that generates quizzes based on topics inputted. This app increases the efficiency at which students are able to learn different topics.
- Applied basic security measures and hashing technology to secure used data, passwords, and quiz generations in a database for future access.
- Created a modern and sleek frontend using Bootstrap for simple navigation while keeping performance high.

Skills

- C++ | Java | Python | C | C# | SQL | HTML | JS | CSS | Unit testing | JFrame | Junit | OOP | Git | Data Processing
- PostgreSQL | Verilog | SolidWorks CSWA | pandas | NumPy | matplotlib | scikit-learn | Flask | TypeScript
- SQLAlchemy | openai API | Bootstrap | React.js | .NET | Next.js | Express | MongoDB | Angular | Agile

Relevant Coursework

- Operating Systems | Data Structures | Software Engineering | Algorithms | Intro to Linux OS | Web Apps
- Data Science | Discrete Math | Linear Algebra | Differential Equations | Cryptography | Embedded Systems
- Principles of Programming Languages | Computer Organization | Digital Logic | Database Management