

Fahris Nassief

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Education

Colorado State University

BS in Computer Science

Fort Collins, Colorado

Expected Graduation, Dec 2025

- **Related Coursework:** Data Structures and Algorithms, Software Engineering, Operating Systems, Systems Security, Discrete Structures and Applications

Skills

Languages: Python, Java, C, C++, JavaScript, SQL, JSON, HTML5/CSS

Technologies & Frameworks: Flask, Bootstrap, Angular, MySQL, SQLite, UML

Tools & Methodologies: Git, GitHub, Agile, Maven, Postman, MySQL Workbench, VIM, Visual Studio Code

Projects

Potion Pile Up - Full Stack Web Application

Tools Used: Python, JavaScript, Flask, SQL, HTML, CSS, Jinja, Bootstrap

- Developed a full-stack web application in Python featuring secure authentication and a custom JavaScript game with dynamic animations and real time game score submissions.
- Built a RESTful API endpoint in Flask to handle game score submissions via JSON, optimizing for concurrent user performance.
- Integrated secure authentication mechanisms, including password hashing and CSRF protection, to safeguard login information.

CS 314 - Collaborative Software Engineering

Tools Used: Java, Maven, Postman, JSON, GitHub Projects, Agile, Scrum, Microservices, Test Driven Development

- Worked in a team of 5 over 4 months to extend an existing Java-based web application, designing and implementing backend microservices with REST APIs and MariaDB in Java to enhance feature functionality.
- Independently benchmarked the Protocol API using Postman for varying trip sizes, gathering response time data to develop a data-driven module that dynamically adjusted optimization levels based on the number of locations and client-specified response time constraints, resulting in shorter user tour lengths while adhering to desired time limits.
- Actively participated in Agile development, including daily scrums, sprint planning, and code reviews; leveraged GitHub for issue tracking, branch management, and peer reviews. Ensured code quality with unit tests in Maven, automated build checks for every pull request, and maintained detailed sprint documentation in the project wiki.

Virtual Network Simulation *Tools Used: Java*

- Developed a multi-threaded virtual network simulation in Java to model the Producer-Consumer problem using bounded buffers and Java concurrency mechanisms.
- Engineered a network of N nodes with K neighbors, employing producer-consumer threads for inter-node message exchange and real-time tracking of message counts and totals.
- Implemented a thread-safe circular buffer and utilized Java concurrency primitives to ensure deadlock-free operation and efficient parallel message processing.

Submission Tracker Launch Agent

Tools Used: C, macOS FSEvents API, libcurl

- Developed a macOS Launch Agent in C to automate monitoring of homework submissions.
- Utilized macOS file system monitoring APIs to detect new files and trigger email notifications.
- Designed and integrated a robust logging system to track file events and ensure reliability of operations.