

Furkan Ercevik

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EDUCATION

University of California - Santa Cruz
Bachelor of Science in Computer Science, GPA: 3.96/4.0

Santa Cruz, CA
Sept 2021 – Present

RELEVANT COURSEWORK

Data Structures and Algorithms, Algorithm Analysis, Programming Languages, Principles of Computer System Design, Probability Theory, Computer Architecture, & Computational Models

TECHNICAL SKILLS

Languages: Python, Golang C/C++, Rust, Type/JavaScript, NodeJS, Java, SQL, NoSQL, HTML/CSS

Frameworks: Svelte/Kit, Express, Gorilla Mux, Cobra, GORM

Tools: Git, Firebase, Docker, AWS, Linux, PostgreSQL, CI/CD, Redis, GCP

Knowledge: Agile Methodologies, Systems Design, OOP, REST, gRPC, Microservices, Concurrency

EXPERIENCE

Tutor & Grader | *Baskin School of Engineering - UCSC* January 2023 – Present

- Evaluated students' assignments, such as homeworks, labs, case studies, and exams by providing accurate feedback, recording grades, and marking errors.
- Collaborated with the professor, teaching assistants, and other readers to develop consistent grading rubrics, distribute workload, and discuss student progress.
- Communicated with students to resolve logistical issues, grading errors, and handle extenuating circumstances.

PROJECTS

Nazar IDS | *Rust, Networking, Security, Systems Design, TDD,* June 2023 – Present

- Developing an intrusion detection system using the Rust programming language
- Implementing packet capture and analysis logic using the pnet crate for low-level packet processing
- Creating a rule syntax to parse user-defined rules using the serde and toml crates.
- Enabling support for various transport layer and application layer protocols like TCP/UDP, ICMP, HTTP, etc.
- Integrated rolling file logging using the log4rs crate

Multithreaded HTTP Server | *C, Sockets, Systems Design, TDD, Concurrency* January 2022 – March 2023

- Created a multithreaded HTTP Server with the C programming Language
- Developed regular expressions to parse and validate a variety of HTTP requests
- Utilized sockets to listen for HTTP requests and send over HTTP responses via file descriptors
- Implemented a thread-safe bounded buffer with POSIX synchronization primitives

STLKER | *Golang, REST, Redis, PostgreSQL, gRPC, Git, Docker, AWS* March 2022 – October 2022

- Developed a back-end application to track securities and user-defined portfolios
- Implemented gRPC and RESTful APIs in Golang
- Utilized the GORM framework to execute queries on a PostgreSQL database
- Added JWT authentication, Redis caching, and Swagger documentation
- Dockerized the application and deployed it to AWS CloudFormation
- Implemented GitHub Actions (CI/CD) to test and deploy the application

VPath | *Python, Pygame, Git* Jan 2022 – Feb 2022

- Developed a GUI application to create and solve user-made mazes using Pygame library
- Implemented saving and loading mazes to a user's local file system
- Created multiple visualizations for SSSP algorithms like Dijkstra's, A-star, and BFS