

AAROH SHARMA

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EDUCATION

University of Texas at Austin – Austin, TX

Bachelor of Science in Computer Science and Bachelor of Science in Mathematics

- Expected Graduation: May 2026
- Relevant Coursework: Operating Systems, Computer Architecture, Data Structures, Algorithms, Discrete Math, Machine Learning, Integral and Multivariable Calculus, Matrices, Differential Equations, Real Analysis
- GPA: 3.88

EXPERIENCE

Digital Intern - SLB

May 2025 - August 2025

- Developed and enhanced a software simulator for a wellhead installation application, enabling realistic real-time noise, shift, and network fault simulations, which significantly improved testing coverage and accuracy
- Designed and implemented front-end features in Angular, including a dynamic scatterplot detection screen, vertical slider UI, PDF job report generation, and responsive layouts, improving visualization and usability
- Integrated back-end functionality such as Modbus protocol support, test success evaluation, and a prototype SharePoint file synchronization system that reduced setup time by up to 10x
- Proposed a machine learning-driven algorithm (invention disclosure IS25.1019 under review) to improve accuracy of landing detection using capacitance and strain gauge sensors

Research Assistant - University of Texas at Austin

May 2024 - March 2025

- Designed and implemented a streaming platform engine, YASPE, in C++ built with CMake that leverages modern C++20 to facilitate high-performance processing of streamed data
- Built multiple components including a buffer management system, windowing system, and a client-server communication system using gRPC and Protobuf
- Designed system using shared libraries for users to implement custom functions for filtering, mapping, and other operations using shared libraries and dynamic linking along with Protobuf message types
- Implemented unit tests using the GoogleTest framework and tested engine on Google Cloud Platform VMs
- Added containerization using Docker to facilitate easy deployment and consistent development environments

PROJECTS

NextUp - React App

January 2024 - May 2024

- Led a team of 4 people in designing and building a React app with Firebase to help people who play pickup sports
- Designed the app through a full design process including needfinding via users surveys, prototyping with wireframes and Figma, and heuristic evaluation to critique initial designs.
- Implemented user profiles and finding pickup games based on users skill level, a sport, and a gym to play at
- Tested effectiveness of app via A/B testing with counterbalancing and expert feedback

PintOS - Operating System

August 2023 - December 2023

- Implemented and expanded the Pintos operating system in C and X86 assembly with a group of 2 other people
- Designed the process scheduling, virtual memory, and file systems in the OS and implemented a system calls interface for user access to these systems
- Implemented a virtual to physical memory mapping system using paging as well as the Fast File System

OptiRouter – Flutter App

June 2020 - June 2022

- Created a cross-platform mobile app designed to find and navigate the optimal route to a given set of locations
- Utilizes Christofides Algorithm to find a 3/2 approximation to the Travelling Salesman problem
- Implements MapBox API service to implement real-time autocomplete for location searches

SKILLS AND HONORS

- Programming Languages: C, C#, C++, Python, Java, Dart, Swift
- Technologies: Angular, React, CMake, Docker, Linux, Git, Firebase, ModBus