AAROH SHARMA

Austin, TX 78705· (832) 820-2188 · aaroh.sh@gmail.com

EDUCATION

University of Texas at Austin – Austin, TX

Bachelor of Science in Computer Science

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

Dulles High School – Sugar Land, TX

EXPERIENCE

Undergraduate Research Assistant - University of Texas at Austin **May 2024 - Current**

- 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 for YASPE including a buffer management system, windowing system, client-server communication system using gRPC and Protobuf, and more
- Designed system 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

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

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 through user experiment comparing two versions of the app

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 a 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++, Python, Java, Dart, Swift
- Technologies: React, CMake, Docker, GoogleTest, OpenMP, MPI, Linux, Git, AJAX, Firebase, XCode
- Honors: Eagle Scout

INTERESTS

- Basketball, Fantasy Football, Volunteering, Video Games, Hiking