

# CHARAN SRIRAM

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## EDUCATION

### The University of Texas at Austin

May 2025

B.S. Honors Computer Science, BBA Canfield Business Honors, Finance Minor

*Relevant Honors Coursework:* Operating Systems, Concurrency, Machine Learning, Computer Architecture, Algorithms, Virtualization

## EXPERIENCE

### Citadel – Software Engineering Intern; New York, New York

Summer 2024

- Working on infrastructure for Fixed Income and Macro

### Tunnel – Software Engineering Intern; New York, New York

September 2023 – January 2024

- Selected against 300+ candidates to work on Neo VC backed collaborative tunneling platform
- Built and deployed two-way real-time messaging Slack integration in Typescript connecting Convex DB to Slack API for 450+ users
- Architected logging system to record network activity, console history, and RRWeb-based screen recording

### Capital One – Software Engineering Intern; Plano, Texas

May 2023 – August 2023

- Developed concurrent network request scheduler deployed on AWS EC2 in Java, handling up to ~500 requests per second
- Created new CI/CD pipeline in Jenkins with 95% test coverage connected to AWS ECS
- Built async translation engine in Typescript to convert text to 30+ languages based on user preference
- Diagnosed and fixed race condition on page load, leading to ~40% speed increase across 12 auto loans services

### University of Texas at Austin – Teaching Assistant, Operating Systems; Austin, Texas

January 2023 - May 2023

- Taught and debugged systems related concepts such as threading, virtual memory, and file systems for class of 80 students
- Held office hours, facilitated discussions, and created assignments & quizzes every week (15hrs/week)
- Received end of course rating of 4.65 from 52 students across all categories (communication, knowledge, engagement)

## RESEARCH

### UT Systems and Storage Lab – Undergraduate Student Researcher

January 2024 - Present

- Researching utilizing Rust's type-state pattern to achieve crash-consistency in file-systems via Synchronous Soft updates

## PROJECTS

### Phazia (bit.ly/phazia) – Founding Engineer

January 2019 – August 2023

*Drag and drop multiplayer app builder that generates multi-framework code for mobile apps*

- Designed and implemented concurrent multiplayer engine using CRDTs in Rust, reducing memory usage by 15x
- Migrated existing JSON data model to Protobuf based model reducing network request sizes by ~75%
- Built frontend and rendering engine using React, TypeScript, Redux, and Styled-Components
- Developed code generation algorithm converting data model to ASTs, targeting Dart/Flutter and Swift/SwiftUI

### Phases (bit.ly/phases-demo) – Lead Developer (open source)

May 2023 – August 2023

- Created concurrent tunneling service in Golang, reducing memory footprint by 4x compared to JavaScript equivalent
- Innovated HTML to React mapper allowing for selection of underlying code for LLM based edits

### ChatOS – Developer

January 2023 – May 2023

- Built functional Kernel with an Ext2 filesystem, virtual memory, and GUI from scratch in C++ with team of 20+ peers
- Implemented E1000 network card driver supporting UDP network protocol in QEMU

## LEADERSHIP EXPERIENCE AND ACTIVITIES

### CSBash – Director

August 2023 – Present

- Designed curriculum assisting underclassmen with CS recruiting and honors coursework for 40 members
- Organized biweekly meetings and workshops with upperclassmen across various fields (SWE, PM, PE, IB, etc.)

### Computer Science and Business Association – Vice President of Growth

August 2022 – May 2023

- Elected to position to handle prospective student events, club-staff relations, and inter-org activities for 90+ members
- Designed and developed website frontend/backend (texascbsa.org) receiving 8 sponsorship requests (BoFa, Intuit, A&F, etc.)

## HONORS

- Neo Scholar 2023
- Third Place (3/45), General Category, Datahacks Hackathon 2022
- First Place (1/20), General Category, Everest Hackathon 2020

## ADDITIONAL INFORMATION

**Programming Languages:** C++, Golang, Rust, Python, JavaScript, TypeScript, Java, CUDA, SQL, Dart, C

**Frameworks and Platforms:** EC2, S3, CloudFormation, Redis, Redux, Firebase, Docker, Node.js, React, Actix-Web