

# TRENT HAINES

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## Education

### University of Texas at Dallas

*Master of Science in Computer Science*

**Graduated May 2023**

*Richardson, Texas*

### University of Texas at Dallas

*Bachelor of Science in Computer Science*

**Graduated May 2022**

*Richardson, Texas*

- 3.93 GPA
- Computing Scholar's Honors
- Full Ride Scholarship

## Relevant Coursework

- Algorithm Analysis
- Statistics for AI/ML
- Distributed Computing
- Database Systems
- C++ in UNIX Environment
- Operating Systems

## Experience

### Roblox

**Feb 2024 – Present**

*Software Engineer - Backend, Payment Systems*

*San Mateo, California*

- Traced the full service communication network for Payment Search, revealing redundant paths and fragmented data sources. Rearchitected Payment Search to directly communicate with a new Elasticsearch-backed API, eliminating middlemen and establishing a single source of truth
- Redesigned the internal representation of "product", replacing an inflexible multi-table schema with a streamlined entities service. Led complex migration across upstream services, eliminating 6 SQL tables and 3 micro-services. Created a reusable Dual-Reading library during the project that became the company standard for data migrations.

### Amazon

**May 2022 – August 2022**

*Software Engineering Intern - Fullstack, Route Planning Optimization*

*Austin, Texas*

- Developed an interactive web app enabling Amazon science teams to analyze delivery route execution patterns, driving route-planning optimization decisions
- Analyzed route data requirements, identified 14 operational metrics, wrote database queries for extraction, developed backend APIs for data retrieval, and implemented frontend integration with interactive visualization for side by side route comparison

### FireEye

**May 2021 – August 2021**

*Software Engineering Intern - Backend, Telemetry*

*Dallas, Texas*

- Migrated security applications from Elastic Container Service to Elastic Kubernetes Service.
- Created a Grafana Dashboard and wrote corresponding PromQL queries in order to monitor various real-time metrics such as bandwidth, throttling periods, and resource utilization on running Kubernetes containers and pods

### University of Texas at Dallas

**Jun 2016 – Aug 2017**

*NanoTechnology Summer Resarch Intern (2x)*

*Richardson, Texas*

- Developed applications and research on nylon artificial muscles and organic aerogels
- Work included in a successful NASA STTR Phase II grant application

## Projects

### Convex Hull Algorithm Visualizer | *JavaScript, HTML, CSS*

**April 2022**

- Created a react application that visualizes three different Convex Hull algorithms to help Computational Geometry students better understand and compare them. Students are able to place points down to create custom data-sets to better understand the strengths of the various algorithms in different scenarios

### Blind Accessibility Chrome Extension | *JavaScript, Python*

**April 2020**

- Collaborated with a team to create a Chrome extension using Google's Cloud Vision API to provide text labeling for images on webpage. These labels can be read aloud using text-to-speech, or can assist in image captioning

## Technical Skills

**Languages:** C++, C#, Java/Kotlin, Python, JavaScript/TSX

**Frameworks and Libraries:** Boost (C++), .NET/ASP.NET, gRPC/Protobuf

**Tools:** Git, Linux, Docker, Grafana