





MATT ZHANG

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EDUCATION

University of Waterloo, Bachelor of Software Engineering (BSE)

2020 – 2025 | GPA: 91.2%

EXPERIENCE

Databricks, Software Engineering Intern

May 2024 – Aug 2024

- Developed ingestion pipeline allowing users to query cloud file metadata at throughputs **>100TB/day**
- Extended Spark functionality to allow users to efficiently query cloud metadata using SQL, Python, Scala, etc
- Ensured reliability across all cloud providers and product surfaces through **>1000** unit and integration tests

X (Twitter), Software Engineering Intern

Jan 2024 – Apr 2024

- Adapted livestreaming stack to build conferencing system **completely replacing Google Meets** internally
- Built dynamic, full-featured conferencing UI including participant mangement, chat and screensharing
- Implemented WebRTC server packet delivery logic in **C** supporting **50** concurrent participants per meeting

X (Twitter), Software Engineering Intern

May 2023 – Sep 2023

- Independently built client for creating, managing and joining audiovisual livestreams for **80M** daily users
- Scaled livestreaming platform from 0.4M to **8M** concurrent users via graceful degradation strategies
- Resolved media ingest issue blocking **30%** of users/sponsors from uploading large media files
- Engineered client caching strategy & server response schema reducing backend load by **32%** in tandem

Spatial, Software Engineering Intern

Sep 2022 – Jan 2023

- Built in-browser visualization of 3D spaces using **89%** less bandwidth than existing solution
- Led end-to-end integration of a chat platform for **150k** MAU leading to **21%** increase in time spent by users
- Architected and implemented user avatar interactions system accumulating over **2 million** uses weekly

Immigrate.ai, Software Engineering Intern

Dec 2021 – Apr 2022

- Authored full-featured task management platform in **React** to empower & organize 12 internal teams
- Optimized rendering & memoization in **React Native** app, reducing API calls by **28%** and load time by **32%**

Imagine Communications, Software Engineering Intern

May 2021 – Sep 2021

- Triaged & fixed critical authentication bugs in **C#** that blocked **35%** of users from accessing products
- Reduced complexity and file size of product deployment by **63%** using **WebSockets** and **RabbitMQ**
- Launched pipeline to normalize **PostgreSQL** databases, reducing storage by **25%** and query time by **33%**

PROJECTS

Scala Compiler

- Built high-level programming language compiler converting Scala-like syntax to MIPS assembly
- Supports type checking, functions(nesting, scoping and recursion), closures and garbage collection

Automated Proof Checker 

- Designed & implemented scanner, validator and checker for mathematical proofs in **C#**
- Modified Shunting-Yard algorithm to parse n-ary inputs, reducing time complexity from cubic to linear

LANGUAGES & TECHNOLOGIES

Scala

Java

Go

Typescript

C++

Python

React

SQL

GraphQL