Matt Zhang

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🎓 EDUCATION

Bachelor of Software Engineering (BSE)   2020 – present | GPA: 92.1%
University of Waterloo

💼 PROFESSIONAL EXPERIENCE

Software Engineer   Sep 2022 – Dec 2022 | San Francisco, CA
Spatial Systems
- Mobile & web engineering for collaborative 3D environments in AR/VR

Fullstack Developer   Dec 2021 – Apr 2022 | Toronto, ON
Immigrate.ai
- Created **React Native** cross-platform NLP chatbot portal with **Rasa** resolving **87%** of user inquiries
- Authored full-featured task management platform in **React** to empower & organize **12** internal teams
- Optimized rendering & memoization, reducing API calls by **28%** and load time by **32%**
- Implemented travelling salesman heuristic to reduce average runtime by **27%**

Fullstack Developer   May 2021 – Sep 2021 | Toronto, ON
Imagine Communications
- Built management dashboards for **10+** top international TV broadcasters using **Angular** and **Vue**
- 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 data aggregation pipeline to normalize **PostgreSQL** databases, reducing storage requirements by **25%** and query time by **33%**

⚗ PROJECTS

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

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

Social Media Aggregator & Visualizer ⧉
- Created API to aggregate social media data for sentiment analysis and entity recognition with **90%** accuracy
- Deployed data pipelines to clean and standardize data, reducing server response time by **32%**

Collaborative Agenda Platform ⧉
- Developed **React/Express/Node.js** web app to connect users and boost productivity in **Typescript**
- Implemented JWT-based authentication using **MongoDB** to store user profiles
- Memoized expensive functions and API calls, shortening load times by **28%**

🧠 LANGUAGES & TECHNOLOGIES

Javascript | Typescript | Python | C# | C++ | SQL | MongoDB | React | React Native | Flask