

ZIYI ZHANG

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EDUCATION

Northeastern University, Toronto, ON

Sep 2023 - Apr 2026

Master of Science in Information Systems: **Walmart Hackathon First Prize Winner**

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS, C#, SQL, Go

Frameworks: SpringBoot, Django, ASP.NET, React, Node.js, Next.js, MUI, Tailwind CSS, JQuery

Tools: Git, Docker, Redux, AWS (S3, Lambda, EC2), Redis, Message Queue, Nginx, CI/CD Pipeline, OAuth2, JWT

Database Management Systems: MySQL, PostgreSQL, MongoDB

WORK EXPERIENCE

App and Eco System Intern

May 2024 - Aug 2024

Volkswagen Group (CARIAD)

Beijing, China

- Designed and implemented a large-scale bug tracking analysis system using **MySQL, Python, and React**, processing 100+ daily test tickets (7,000+ total tickets) from autonomous driving testing pipelines, achieving **500ms** average query response time for complex analytical queries.
- Developed automated data processing pipeline implementing intelligent categorization of reported issues across autonomous driving subsystems (Perception, Planning, Control). System achieved **85%** accuracy in automated classification, reducing manual categorization effort by **40%**.
- Built responsive front-end dashboard using **React, TypeScript and Redux** for state management, featuring real-time data visualization using dynamic charts and heat maps, interactive bug trend analysis with drill-down capabilities, role-based access control for different engineering teams.

Software Developer

Oct 2021 - Dec 2022

Thoughtworks Holding, Inc.

Wuhan, China

- Developed a corporate text-to-speech web platform serving **900+** Porsche dealerships with **5000+** end users. Built responsive frontend interface using React and Tailwind CSS adhering to Porsche's design guidelines, processing 3000+ daily audio.
- Implemented serverless architecture using **AWS** Lambda and S3, optimizing audio file processing and storage costs by **40%** compared to traditional server setup. Integrated **Azure** Cognitive Services SDK supporting 15+ languages and 25+ voice profiles across 3 accent categories (native, professional, casual).
- Used **Redis** caching layer for frequently used marketing scripts, reducing audio generation costs by 10% and response time from 1.5s to 100ms for cached content. Cache hit rate reached 20% for standard marketing materials across dealerships.
- Engineered secure authentication flow with Porsche's SSO platform, handling **1500+** daily active users with average login time under 1 second. Designed intuitive UI components reducing average time-to-first-audio from 2 minutes to 30 seconds. System maintains consistent performance handling peak loads of 300+ concurrent users during global marketing campaigns.

PROJECTS

Recommendaiton Platform for Walmart

Oct 2023 - Nov 2023

- **Won first prize** in Walmart hackathon and earned the opportunity to participate in a one-month incubator program
- Developed both the front-end and back-end of a recommendation platform aimed at optimizing item placement in Walmart's limited shopping areas, improving space utilization by **15%**. Utilized **PostgreSQL** to store Walmart's data for later analysis.
- Implemented the backend using **Python** and **Flask**, integrating scikit-learn machine learning library to predict future sales and dynamically adjust store floor plans across different locations in Canada based on customer behavior and inventory data.
- Created a 3D floor visualization and animation using **JavaScript, React** and **CSS**, enabling store managers to interactively visualize and implement the recommended floor plans. Used Python to generate data visualizations and plots of historical sales data, providing insights that informed the dynamic floor plan adjustments.