

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, Framer Motion

Tools: Git, Docker, Redux, AWS, Redis, Message Queue, Nginx, CI/CD Pipeline(Jenkins), OAuth2, JWT, Kubernetes

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, Redux and Power BI** 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 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 Canada

Oct 2023 - Nov 2023

- **Won first prize** in Walmart hackathon and earned the opportunity to participate in a one-month incubator program.
- Implemented **Docker** to containerize individual services, facilitating consistent deployments and local development.
- 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.
- Set up a **CI/CD pipeline** using Jenkins/GitHub Actions to automate build, test, and deployment workflows.
- 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 visualize sales data and inform floor plan adjustments.