YIYANG WANG

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EDUCATION

Master of Engineering, Computer Engineering, University of Toronto, 4.0/4.0 *Sep 2024 - June 2026*
Bachelor of Science with Honors, Computer Science, University of Alberta, 3.6/4.0 *Sep 2016 - June 2020*

EXPERIENCE

University of Toronto Toronto, Canada
Teaching Assistant *Sep 2024 – Dec 2025*
CSC207 Software Design (Sep–Dec 2024), CSC148 Introduction to Computer Science, CSC301 Introduction to Software Engineering, CSC309 Programming on the Web (Jan–Apr 2025), CSC108 Introduction to Computer Programming, CSC207 Software Design (Sep–Dec 2025)

- Taught software design, web development, and software engineering principles through tutorials and lectures.

- Guided students in applying Agile methodologies, SOLID principles, and version control workflows.

- Evaluated projects, ensuring code readability, maintainability, and adherence to best practices.

ThirstyBrain Inc. Remote, Canada
Software Development Engineer Intern *Oct 2024 – Jun 2025*

- Designed and maintained backend services and **RESTful APIs** using **Java** and **Spring Boot**, powering a product-trading platform that processed over 30,000 weekly transactions.

- Boosted backend performance by 50%+ using **Redis** caching and **Kafka**-based microservices, improving system scalability and responsiveness.

- Deployed containerized applications to **AWS** with **Docker** and **Kubernetes**, ensuring seamless rolling updates and fast rollback capabilities with zero downtime.

- Developed thorough **JUnit** test suites covering backend services and database logic, reaching 88% test coverage, and contributed to Agile sprints to drive continuous improvements in code quality and team delivery speed.

PhD League Edmonton, Canada
Web Developer & Academic Program Assistant *Jul 2020 – Apr 2024*

- Developed a student portal using **React.js** for intake forms, submissions, and internal task tracking, supporting hundreds of students and advisors.

- Migrated legacy content to **WordPress**, maintained plugins and security updates, and configured analytics modules to improve content tracking and usage insights.

- Implemented **Python scripts with PostgreSQL** to structure and archive application materials, automating document workflows and improving team efficiency.

- Built an automated template generation tool using **LaTeX**, enabling fast creation of timelines, statements of purpose, and resume templates, increasing student application success rates.

PROJECTS

Rainfall Prediction with Feature Selection

- Implemented decision tree-based feature selection to optimize KNN and Random Forest models.

- Achieved a 2% improvement in prediction accuracy by reducing data redundancy and complexity.

FlightGo – Full-Stack Flight Booking Platform

- Developed a **React/TypeScript + Tailwind CSS** frontend and **Express.js + PostgreSQL + Prisma** backend, implementing core features such as flight search, seat selection, booking, itinerary management, and user administration.

- Designed and implemented **RESTful APIs** with **Google OAuth 2.0** authentication and role-based access control; documented endpoints using **Swagger** for streamlined development and testing.

- Containerized frontend and backend services with **Docker & Docker Compose** and deployed to **DigitalOcean**, achieving scalable and highly available production deployment.

- Integrated **DigitalOcean Spaces** object storage with **PDFKit** to automatically generate and store invoice files, enhancing user experience and system reliability.

SKILLS

Languages & Frameworks: Python, Java, JavaScript/TypeScript, React, Next.js, Node.js, Express.js, Flask
Web & Mobile: Responsive Design, React Native, Tailwind CSS, Android Studio
Database & Backend: PostgreSQL, MySQL, SQLite, MongoDB, REST APIs
Tools & DevOps: Git, Docker, CI/CD, Azure, Postman, JUnit