

Yan Xue

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TECHNICAL SKILLS

Languages: Python, C++, C, Java, HTML/CSS, SQL, TypeScript, JavaScript, GraphQL
Technologies: Git, MySQL, Node.js, Firebase, PostgreSQL, Mongo, Tailwind, Docker, Kubernetes
Frameworks & Libraries: React, Express, Next.js, Vite, Vitest, Angular, Flask, Pandas, NumPy, Scikit-learn

EDUCATION

University of Waterloo Sep 2024 - Apr 2029
BASc in Computer Engineering, Honours, Co-op Waterloo, ON
• Engineering Entrance Scholarship (**top 2.4%**); President's Scholarship of Distinction; In excellent standing

EXPERIENCE

Software Engineer Intern Fall 2025
BitGo Palo Alto, CA

- Incoming Fall 2025, working on the developer experience team to optimize workflows and improve BitGo's API

Software Developer May 2025 – Present
UW Blueprint Waterloo, ON

- Developing a full-stack application for NPO Marillac Place to centralize resident records and track daily programs
- Built **GraphQL** resolvers with **TypeScript** and **Prisma** to enable data **CRUD** functionality for admins
- Implemented a daily cron job to auto-expire outdated messages, streamlining admin workflows by **35%**

Software Engineer Intern Jan 2025 – Apr 2025
HongMall Canada Markham, ON

- Built a Rasa chatbot by embedding and clustering **1.48M+ queries** with **SQL/Python**, fine-tuning training for **95% intent detection** and **response handling**, designed to support **1M+ users**
- Engineered a robot control system using **Python, React, and Flask**, integrating **15+ Robot HTTP endpoints** to support real-time navigation and stock retrieval for over **50K+ warehouse items**
- Optimized the item checkout flow in **Angular** and **TypeScript**, reducing **request latency** by **34%**

Software Engineer Intern Feb 2023 – Aug 2024
Skynet Security System Ltd. Vancouver, BC

- Designed and built a cross-platform invoice system with **Python, Tkinter, and ReportLab**, automating billing for **50+ clients** and reducing invoice preparation time by **75%**
- Created a multiprocessing **Python** script for **CSV normalization**, increasing workflow speed by **40%**
- Developed the company's website using **React and TypeScript**, which contributed to **60+ clients** in 2023

PROJECTS

🔗 **Comparisum - 1st Place @WatAI Open Projects 2025** | *Python, React, Flask, TypeScript, SQL, AWS*

- Led backend development for a responsive web app validating Amazon ASINs in real-time and delivering AI-generated review summaries, achieving **<3s response times**
- Engineered prompts for Groq's LLM API, achieving **95% parsing accuracy** for structured review summaries

🔗 **JobBot** | *Python, TypeScript, Flask, React, TailwindCSS, HTML, Pandas, BeautifulSoup, Selenium*

- Built an **AI job assistant** that streams **Gemini-2.0-Flash** output to scrape job postings, extract structured data, and auto-export results to Excel/CSV with **95%+ capture accuracy**
- Developed an interactive resume editor with live **AI-powered suggestions** and inline gap analysis

🔗 **ML Drug Longevity Research** | *Python, Pandas, NumPy, Scikit-learn, Seaborn, Random Forest, Conformal Prediction*

- In collaboration with **Kosiarski Labs**, affiliated with **The Hospital for Sick Children** and **Vector Institute**
- Curated biochemical data to explore molecular patterns linked to **lifespan extension**: processed **3,239 compounds** by cleaning entries, generating molecular structures (RDKit), and compiling **17 descriptors**
- Built three models using **Random Forest**, **Chemprop GNN**, and **Conformal Prediction**, with the conformal model achieving **91.3% interval coverage** and **14.22%** Mean Absolute Error