Yan Xue

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EDUCATION

University of Waterloo	Sep 2024 - Ongoing
BASc in Computer Engineering, Honours, Co-op — GPA 3.9	*Waterloo, ON*

- Engineering Entrance Scholarship (**top 2.4%**); President's Scholarship of Distinction; In excellent standing

TECHNICAL SKILLS

Languages: Rust, Python, TypeScript, JavaScript, C++, C, Java, SQL, GraphQL, Go, Assembly, HTML/CSS
Development: Git, GitHub Actions, Docker, Kubernetes, PostgreSQL, AWS CodeArtifact
Frameworks: React, Express, Next.js, Vite, Angular, Flask

EXPERIENCE

Software Engineer Intern	Dec 2025 – Present
Photon Framework (Backed by YC MiraclePlus 25F, Z Fellows)	*San Francisco, CA*

- Architected BuildSpace ⧉, an open-source CI/CD framework adopted by **100%** of company services to automate versioning and multi-registry deployments (Crates.io/NPM) via semantic commit analysis
- Engineered a **Rust** reverse-tunneling plane for **SSH/VNC NAT traversal**, achieving **2.8ms** round-trip time
- Created a **Go** fleet dashboard for automated Mac provisioning for **20+ Macs**, health checks, and Slack alerts

Software Engineer Intern	Sep 2025 – Dec 2025
BitGo - Developer Experience Team	*Palo Alto, CA*

- Built a **Rust-based** linter using Tree-sitter and GraphQL to enforce API spec quality on **3,200+** operations for ∼ **25** weekly PRs, flagging bad specs instantly and saving **20+** hours of weekly debugging
- Unified **12 SDKs** into monorepos using **git subtree** and **npm workspaces**, cutting **PRs** for API changes by **50%**
- Developed a **Rust** Git extension ⧉ to verify subtree merge integrity, reducing manual auditing time by **98x**
- Optimized SDK CI throughput using **Docker context checksums** to trigger tests only when SDK changes occur
- Improved BitGo **SDK OpenSSF Scorecard from 5.4 to 7.5** by remediating npm vulnerabilities (XSS, DoS)

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

- Developed Rasa chatbot trained on **1.48M+** historical queries, achieving **95%+** intent detection for **1M+** users
- Engineered warehouse robot control dashboard with **Python**, **React**, and **Flask** managing **50K+** inventory items
- Optimized checkout flow frontend rendering in **Angular** and **TypeScript**, reducing page load latency by **34%**

Software Engineer Intern	May 2024 – Aug 2024
Skynet Security System Ltd.	*Vancouver, BC*

- Created an invoice system with **Python** and **Tkinter**, automating creation for **100+ invoices** annually
- Engineered Python pipeline consolidating customer data, deduplicating **2K+ records** with **98% accuracy**
- Developed the company's website ⧉ using **React and TypeScript**, contributing to **60+ new clients** in 2024

PROJECTS

 Git-semantic search | *Rust, Git, BGE Embeddings, Vector Search*

- Built natural language git logs search reaching **850+ users**, searching **10K+ commits in <100ms**
- Implemented BERT tokenization with cosine similarity, reducing commit discovery from **20+ min to <1s**
- Engineered binary vector storage achieving **3KB/Commit** with zero API dependencies

 Flux | *TypeScript, React, TailwindCSS, PostgreSQL, WebSockets*

- Architected a **bi-directional WebSocket bridge** that tunnels local LLM runtimes to iMessage, enabling **6,000+ users** to deploy production agents in <5s, achieving **#1 Product of the Day** on Product Hunt
- Developed the **type-safe SDK** using **Zod** for runtime schema validation, abstracting complex native iMessage protocols such as tapbacks, multi-bubble responses, and phone-number auth into a simple **TypeScript API**

 Marillac Place | *TypeScript, React, GraphQL, PostgreSQL, Docker*

- Developed a full-stack task management platform for Marillac Place **NPO** serving **28 homeless women**
- Engineered a **GraphQL** API with **Prisma** and **PostgreSQL** to manage resident records and automated task tracking