Brian Gao

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EDUCATION

University of Waterloo **Sep 2021 – May 2026**
Systems Design Engineering (Bachelor of Applied Science) *Waterloo, ON*
- Cumulative GPA: 89% (3.95/4.0)
- Courses: Data Structures and Algorithms (C++), Digital Systems (C)

SKILLS

- **Languages:** TypeScript/JavaScript, Python, SQL, Go, C/C++, HTML/CSS
- **Frameworks:** Amazon Web Services, NodeJS, Express, Docker, Kubernetes, Google Cloud Platform
- **Libraries/Tools:** Git, React, PostgreSQL, Bazel, Harness, Jira, Postman, Unix/Linux, REST APIs

EXPERIENCE

Project Lead/Full Stack Developer **May 2022 – Present**
Waterloop *Waterloo, ON*
- Led the web team of 4+ developers through term planning and standups, completing major project deliverables
- Developed **3+ REST APIs** with **PERN** for a website facing potential sponsors and **5000+ monthly views**
- Designed the database schema for the team merch store and developed **15+ unit/integrations tests** using **systems design methodologies** and **Mocha/Chai**, deploying a highly requested feature to production
- Built a secure and industry-standard authentication flow by integrating OAuth 2.0 with **Google Identity**

Software Engineering Intern **Sep 2022 – Dec 2022**
Arctic Wolf Networks *Eden Prairie, MN*
- Deployed a user interface in Django with **Kubernetes** for a security database used by **1000+ stakeholders**
- Integrated **CI/CD** with **GitHub Actions, Bazel,** and **Harness,** automating **AWS deployments (Helm, EKS)**
- Architected a field-mapping framework with **Python** and C4 system diagrams, reducing pipeline bottlenecks
- **Won a company hackathon (80+ participants)** with a team by designing **Go** APIs that provide IP-blockers

Software Engineering Intern **Jan 2022 – Apr 2022**
JANA Corporation *Aurora, ON*
- Pioneered 4+ project deliverables with **React**/**Redux** for a risk management tool generating **$20 million/year**
- Implemented downloadable risk reports using **TypeScript**, providing customers with executive-friendly pdfs
- Published **5+ npm packages** with Storybook and Lerna, enabling code reusability across the software team
- Spearheaded a company presentation on web security to 50+ employees, increasing awareness of best practices

Firmware Developer **Sep 2021 – Jan 2022**
Midnight Sun Solar Car Team *Waterloo, ON*
- Programmed microcontrollers in **C** that controlled the power distribution and internal state of a solar car
- Validated PCB boards by doing manual and automated testing with Python, achieving high test coverage

PROJECTS

ScanEats – WinHacks (winner) | *Python, JavaScript, Flask, React, TensorFlow, Postman*
- Built a **hackathon-winning (200+ participants)** lifestyle app with **Flask** that analyzes food quality

Youtistics | *TypeScript, React, Google Cloud Platform, YouTube Data API, Google Identity, Postman*
- Engineered a statistics app using **GCP** and **YouTube Data API** that provides insight into user viewing-habits