

William Shi

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TECHNOLOGIES AND SKILLS

Languages: C++, Python, JavaScript, Bash, Java, SQL, Dart, Rust, HTML, CSS, MATLAB

Frameworks & Tools: TensorFlow, React, Next.js, Node.js, MongoDB, PostgreSQL, Linux, Flutter, Git

EXPERIENCE

Interac Corp.

Toronto, ON

Software Developer

Jan. 2023 – April 2023

- **Spearheaded** development for a new **data-driven** market analytics internal tool
- Wrote **NLP** processes for news articles & financial reports: **topic modeling**, **keyword extraction**, **named-entity recognition**
- Implemented **data pipeline**: data source ingestion, processing, caching, and storage
- Created backend **REST API**: DB schemas, CRUD, auth, and endpoints (**Python**, **FastAPI**, **PostgreSQL**, **MongoDB**)
- Created frontend UI components and backend connections with **Next.js** and Tailwind

Workplace Safety and Insurance Board

Waterloo, ON

Software Developer

May 2022 – August 2022

- **Lead a team** of six developers to revamp WSIB's outdated injury claim process into a modern **mobile app**
- Researched and chose tech stack (**Flutter**, **Node.js**, **MongoDB**, **Firebase**), set up workspace (GitHub repos, Jira)
- Primary work involved creating **backend REST API**: database schemas, flows, business logic
- Implemented user **authentication & authorization** in frontend, middleware, and backend
- Created automated backend documentation using **OpenAPI**

Paperminds

Montreal, QC

Full-stack Developer

May 2021 – August 2021

- Created frontend UI components using **React** and **Next.js**, such as user profile pages, search results page
- Introduced secure user **authentication & authorization** processes
- Implemented user **online payment integration**
- Improved team workflow by setting up workspace **linting**, introducing Jira, and making documentation guidelines

Cache and Cookies

Toronto, ON

Frontend Developer & UX/UI Designer

Oct. 2020 – April 2021

- Produced affordable website services to **help local businesses** go digital and recover from COVID-19 pandemic
- Created responsive and modern frontend using **React**, with mobile-first design approach
- Collaborated with **notable clients** like global bubble tea chain [HiTea](#) and [MSMR](#), a project contracted by a professor at Toronto Metropolitan University

PROJECTS

- [Urban Congestion Modeling](#) convolutional neural network determines traffic congestion from Google Maps satellite images. **Winner of MacHacks 2022**. Made with **Python** and **MATLAB**
- [Chess Project](#) command-line chess game. Built with **C++**, incorporating **OOP** and **design patterns**
- [Network Membership Protocol](#) network failure detection & dissemination via **gossip protocol multicasting**, written in **C++**
- [Personal Website](#) built with **React**, **Next.js**, and Chakra UI

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computer Science

Sept. 2020 – present

Coursework: OOP, data structures, algorithms, logic & computation, statistics, operating systems, networking, distributed systems

Victoria Park Collegiate Institute

Toronto, ON

International Baccalaureate (IB) Diploma Programme (39/45 points)

Sept. 2016 – June 2020