Hubert Xu

Toronto, ON · hubert.xu@mail.utoronto.ca · 416-827-8268 · Github · Linkedin

Education

University of Toronto (St. George) — Toronto, ON
Bachelor of Science Computer Science — Sep 2022 - Jun 2026

Achievements: *Dean's List 2023*

Technical Skills

Languages:	*Python, Java, C, C++, Javascript, Typescript, SQL*
Libraries:	*PyTorch, NumPy, OpenCV, Pillow, React*
Frameworks:	*Spring MVC, Spring Data, Springboot, NextJS, ExpressJS*
Cloud:	*Microsoft Azure, Google Cloud Platform*

Certifications

- Microsoft Certified: Azure Fundamentals (AZ-900)

Experience

UofTHacks — Toronto, ON
Software Developer — May 2024 - Present

- Designed and maintained a responsive website using **NextJS**, improving interactivity and delivering a seamless experience for over **3000** UofTHacks applicants by resolving prioritized issues and ensuring continuous functionality.
- Developed a Python script using **Pillow** and **Pandas** to parse hacker data from CSV files and **generate custom name-tags** with QR codes for efficient identification during the event.

Loobo Inc. — Richmond Hill, ON
Fullstack Developer — April 2023 - September 2023

- Developed full-stack transaction management system which showcases data from a database. Built using **Java** with **Spring MVC** and **Spring Data** to handle server-side operations, **React** with **Vite** for frontend, and **PostgreSQL** for database.
- Conducted comprehensive QA testing utilizing Amazon **Alexa Qualification Tool** for automated device testing, enabling efficient verification of application features, compatibility, and performance.

Projects

Handwriting Generator *Python, PyTorch, Pillow*

- Built and trained a **Conditional GAN** using PyTorch, optimizing model architecture and training processes to accurately replicate user handwriting styles.
- Designed and implemented a handwriting **OCR** system using PyTorch, building a custom **CNN** model for feature extraction and text recognition.

UserThreads *C*

- Built a **user-level threading** library for the **Ubuntu** Linux distribution with **preemptive** scheduling, utilizing a priority queue for efficient thread management.
- Engineered advanced threading features, including **lifecycle** management and **preemption**, without relying on **makecontext** or **switchcontext**, showcasing deep understanding of low-level systems programming.

ClassLynk *Java, Spring, Firebase, Google Maps Platform, JavaSwing*

- Engineered a streamlined scheduling application, harmonizing Google Maps Platform capabilities with precision-enhanced algorithms to create optimized class schedules, ensuring efficient navigation.
- Utilized the **A*** algorithm for calculating the best timetable using a heuristic that considered user preferences, location proximity, travel time, minimizing transit delays, etc.
- Applied **SOLID** design principles and **Clean Architecture** to create modular, maintainable, and scalable code.