

Saemin (Sophie) Kim

Full-stack & Machine Learning Software Engineer

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EDUCATION

University of Toronto, BAsC. Computer Engineering

Sept. 2019 - April 2024 (expected graduation with Co-op) | GPA: 3.7/4.0

TECHNICAL SKILLS & SOFTWARE

| Programming languages | Frameworks | Tools |
|---|---|---|
| C/C++, Python, Kotlin, Java, JavaScript, SQL, MATLAB, Verilog | PyTorch, Tensorflow/TFLite, ONNX, OpenCV, Flask | Git, GitHub API, JIRA, Excel, MS Office, Windows & Linux environments |

WORK EXPERIENCE

- Aug 2023 – **Educational Module Developer**, *Dept. of Computer Science, University of Toronto*
Present
- Develop data science/machine learning educational modules and program code
 - Refine curriculum and teaching guides to integrate modules into a classroom setting
- May 2022 – **Machine Learning Software Engineer**, *Qualcomm*
May 2023
- Wrote production-ready code to optimize Qualcomm machine learning compilers
 - Created an internal software tool to help developers validate machine learning models
 - Designed an Android app to perform human detection and tracking at 10-15 fps
- Sept 2021 – **Engineering Campus Experience Officer**, *Faculty of Engineering, University of Toronto*
Apr 2022
- Provided 1-on-1 mentorship to students, referring to academic/health resources as needed
 - Planned and executed over 6 community building events for a diverse student body
- May 2021 – **Research Assistant**, *Dr. Shurui Zhou, University of Toronto FORCOLAB*
Aug 2021
- Researched pain points for interdisciplinary groups in scientific software development
 - Conducted a systematic literature review of over 40 sources
 - Aggregated metadata on scientific open-source projects into Excel using GitHub APIs
- May 2020 – **Academic Mentor**, *University of Toronto Engineering Academy*
Aug 2020
- Taught a high school physics review to 2 classes of 15 incoming engineering students
 - Supported students transitioning to university through 1-on-1 and group mentorship

ENGINEERING PROJECTS

TinyML Smart Weather Station— *a low-cost AI-powered weather station*

- Arduino Nano RP2040 running a key-word spotting TFLite model to detect rain/wind conditions
- Implemented on-device training to fine tune inference results at deployment time

2T-Tree Maps— *a Geographic Information System (GIS)*

- City mapping API built on OSM and real-time BikeShare data display using Libcurl and BOOST
- Implemented a variation of TSP as a route-finding feature using Dijkstra's algorithm.