Lefan Hu

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Skills

Programming	Python, C/C++, Java, HTML/CSS, JavaScript
Technologies	Pandas, PyTorch, Pillow, Sequelize, MongoDB, Postgre, Docker, Docker Swarm, AWS (Lambda, API gateway, EC2, Sagemaker) React, Nginx, Spring Boot, GCP, GKE, Pub/Sub, Cloud Functions, Linux, Shell (Bash/Zsh), Excel.
Soft Skills	Time Management, Teamwork, Communication, Problem-solving, Presentation.

Work Experience

TELUS Corporation   *Ottawa, ON*
Software Developer Intern (Summer Co-Op)   *May 2023 - August 2023*

- Contributed to auto-callout system (ACMP) for field technician and contributed to the reliability of response times in times of need
  Technical Skills: Python, Jinja2, Docker, **Docker Swarm**, Sequelize, **Nginx**, LDAP
- Developed a google chat internal tool for use across the TELUS Reliability Center of Excellence team
  Technical Skills: Java, **GCP**, **GKE**, Cloud Functions, Cloud **Pub/Sub**, Github Actions, **Spring Boot**

InfiniHacks   *Ottawa, ON*
InfiniHacks Organizer   *July 2019 - November 2019*

- Organized and planned all aspects of InfiniHack's Hackathon
- For InfiniHack's first Hackathon in 2021, raised over **$2000** in prizes, gathered over **250 hackers from 9 different countries**, and created 26 projects that address real-world issues
- Presented and lead Machine Learning workshops using **PyTorch**

Projects

DrawBot | ⧉   *Waterloo, ON*
Hack The North 2022 | Managed with Git   *Sept. 2022 - Sept. 2022*

- A hackathon project that turns speech descriptions into drawings
- **Assembly AI** turns speech into text prompts for **Stable Diffusion**
- Generated image is translated to vector format and sent to Raspberry PI, which controls a gantry system to create the drawing
- **Fusion 360** used to create models for hardware aspect of project

Hive-HQ - Hackathon Winner | ⧉   *Ottawa, ON*
Hack The North 2021 | **Best Use of Google Cloud** | **Best Entrepreneurship Hack** | Managed with Git   *Sept. 2021 - Sept. 2021*

- An AI-powered, multi-target tracking system that identifies high traffic areas in public spaces. The project empowers small business owners by bringing AI analytics to small business owners.
- **YOLOv5** model was loaded onto **PyTorch** to recognize and annotate individuals
- Built using **Google Cloud**, matrix perspective transformations, **React.js**, **OpenCV**, **Pytorch**, and **YOLOv5**

MaskPass - Hackathon Winner | ⧉   *Ottawa, ON*
MLH Hacky Birthday 2021 | **Third Overall** | Managed with Git   *July 2021 - July 2021*

- An automatic AI utility that uses cameras and machine learning to discern if an individual has a mask on or not to open a conditional door
- System that recognizes a customer's mask status - no mask, mask on, and states in-between
- Leverages **cloud computing** to be viable on low-power devices
- Built using **TensorFlow** for CV, **Flask server** for custom API, **VEX** radio for motor control of door

Interqu Interview Platform | ⧉   *Waterloo, ON*
Interqu - Work In Progress   *June 2023 - Now*

- An interview practicing platform that uses AI to analyze speech, expression, and general flow of a mock interview
- Java boot spring front-end, back-end processing is handled by the following: AWS Statemachine, Lambda, Serverless Application Model, pytorch, chatGPT
- Built using **SWAG - nginx**, **Docker**, **AWS - lambda, statemachine, stepfunctions, SAM, etc**, **Pytorch**, **ChatGPT**

Education - University of Waterloo

University of Waterloo   *Waterloo, Canada*
Bachelors in Computer Engineering - **GPA - 3.91**   *Sept 2021 - April 2027*

- Part of various clubs - Waterloo Computer Science Club, WARG, Archery
- **Current Courses:** Digital Computers, Electronic Circuits, Algorithms and Data Structures, Advanced Calculus 1, Numerical Methods