WILLIAM GAO

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SKILLS

Technologies		Software Design	Programming Languages	
• Tensorflow	• Keras	• Multithreading	• Python	• C/C++
• PyTorch	• Slurm	• Object Oriented Programming	• TypeScript	• Java
• Pandas	• Git		• SQL	

WORK EXPERIENCE

ML Engineer | SickKids Hospital | Center for Computational Medicine   **May 2023 – Sept 2023**

- Built and trained **Convolutional Neural Networks (UNet, ResUNet)** with GPU acceleration to perform stroke segmentation and skull-stripping on 3D MRI images
- Independently engineered an image processing **pipeline** for all pediatric stroke imaging research at SickKids by utilizing trained CNNs and image processing tools like skimage
- Proposed a universal patient ID system to tackle patient duplication when they move between healthcare facilities. After gaining support at the managerial level, presented the idea to an international executive committee representing 100+ hospitals across 30+ countries.
- Researched and implemented machine learning models such as **Support Vector Machines**, **3D CNN**s, and **Multi-Variate Regressions** to predict future stroke patient symptoms from MRI images

Software Engineer | PointClickCare   **Sept 2022 – Jan 2023**

Backend Engineer | OMERS   **Jan 2022 – May 2022**

Full Stack Developer | The Co-operators   **May 2022 – Sept 2022**

RESEARCH EXPERIENCE

Research Assistant | University of Waterloo   **May 2023 – Sept 2023**

- Worked under Prof. Roberto Guglielmi to research the dynamics of the spread of COVID-19 and Influenza in schools with emphasis placed on the impact of control measures
- Utilized **C++** and **Python** to build an **Agent Based Model** to compute the dynamics of the system
- Control measures such as asymptomatic testing and vaccinations are easily configurable for easy use of the model in policy decision making

PERSONAL PROJECTS

UW Path – A web app for students at UWaterloo to plan their degrees   **2022**

- Led a team of 8 members to develop and maintain a **cloud based (GCP)** application with 5000+ users
- Pitched to the University of Waterloo's math/computer science faculty to secure $1200/year funding

EDUCATION

Bachelor of Computing and Financial Management: Computer Science, Finance

University of Waterloo – Waterloo, ON   Expected in 05/25

Cumulative GPA: 92.71

Recipient of CFM Outstanding Academic Achievement Award