

QING (MARTIN) MA

2021 Fall New Graduates

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🌐 MartinQingM

📍 Ottawa, ON



EDUCATION

M.S. in Computer Science

University of Ottawa

📅 Sep 2018 – Oct 2021

GPA: 3.90/4

B.S. in Computer Science

Tianjin Polytechnic University(TJPU)

📅 Sept 2014 – June 2018

GPA: 3.69/4

HORNORS AND AWARDS

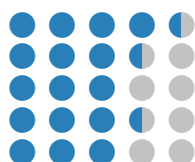
🏆 International Admission Scholarship
\$30,000 Awarded by uOttawa

🏆 Outstanding Graduates of Year 2018
Top 10% Graduates in TJPU

📈 Head's Scholarship
Top 10% Students in TJPU

SKILLS

Python
C, C++
Java
R
C#



Linux Git Matlab SQL Unity3D
Agile JIRA Confluence Tomcat
Spring MVC JUnit Spring Boot
RESTful API JavaScript React
Machine learning Google Cloud
Artificial Intelligence Image Processing
Pytorch Numpy Jupyter

Teamwork Collaboration
Problem Solving Critical Thinking
Adaptability Time Management

WORK EXPERIENCE

Web developer (Co-op)

Employment and Social Development Canada

📅 Sep 2019 – Dec 2019

📍 Gatineau, QC

- Developed web services with spring boot and Restful API in Java
- Built unit and integration tests with Junit and Citrus
- Used Git for source code control. Studied different merging strategies such as one flow and git-flow
- Collaborated in a team using Agile and SCRUM

Data Programmer (Co-op)

CHU Sainte-Justine Research Centre

📅 May 2019 – Aug 2019

📍 Montreal, QC

- Developed an innovative technological workflow for peptides identification that shorten the data analysis time from weeks to days
- Built the workflow in R language utilizing multiple programming languages including Python, Shell Script and Java
- Developed data visualization workflow in R language for peptides data
- Studied the knowledge about Immuno-peptidome therapy and peptides identification
- Contributed to three publications

OTHER EXPERIENCE

Master's thesis

University of Ottawa

📅 May 2020 – Aug 2021

📍 Ottawa, ON

- Designed an algorithm for synthetic X-ray image generation from CT data using matrix projection and lookup tables in Python
- Applied the generation method in Unity3D in C# to build a VR simulation demo for training surgeons
- Developed a deep learning-based super-resolution network for X-ray images with transformer architecture in Pytorch

Teaching Assistant

University of Ottawa

📅 Jan 2020 – Aug 2021

📍 Ottawa, ON

- Teaching assistant for ITI1120 Introduction to Computing I (Python) and CSI3131 Operating Systems
- Explained tutorial and lab content to students
- Graded assignments with unit tests and provided feedback to students
- Demonstrated initiative by improving lab materials and lab codes with programming languages in C and Python

LANGUAGES

English
Chinese



HOBBY

Skiing

Snowboarding

Mountain biking

Kayaking

Hiking

Swimming

Badminton

CSIA Level 1 Ski instructor

Part-time Ski instructor at Mont Cascades

PROJECTS

- Synthetic X-ray image generation for Image-guided surgery VR training simulation system
- Extended validation for a CNN based surgical skill assessment method
- Credit Card Fraud Detection Study (Machine learning approach)
- Technical Debt analysis for open-source software
- Conducted research about AI ethical issues for smart speaker devices
- Adventure 3D game parkour running and collecting gem with Unity3D
- Researched on hospital personnel position based on Wireless Sensor Network
- Face number reorganization on Raspberry Pi 3 B+ with an external USB camera

PUBLICATIONS

- Kovalchik, K. A., Ma, Q., Wessling, L., Saab, F., Despault, J., Kubiniok, P., ... Purcell, A. W., et al. (2021). Mhcvizpipe: A quality control software for rapid assessment of small-to large-scale immunopeptidome data sets. *Molecular & Cellular Proteomics*, 100178.
- Ma, Q., Koh, J. C., & Lee, W. (2021). A frequency domain constraint for synthetic and real x-ray image super resolution. In *International workshop on machine learning for medical image reconstruction* (pp. 120–129). Springer.
- Saab, F., Hamelin, D. J., Ma, Q., Kovalchik, K. A., Sirois, I., Faridi, P., ... Caron, E. (2021). Rhybridfinder: An r package to process immunopeptidomic data for putative hybrid peptide discovery. *STAR protocols*, 2(4), 100875.
- Vizcaino, J. A., Kubiniok, P., Kovalchik, K. A., Ma, Q., Duquette, J. D., Mongrain, I., ... Sirois, I., et al. (2020). The human immunopeptidome project: A roadmap to predict and treat immune diseases. *Molecular & Cellular Proteomics*, 19(1), 31–49.
- Song, G., Qu, G., Ma, Q., & Zhang, X. (2017). Improved energy efficient adaptive clustering routing algorithm for wsn. In *China conference on wireless sensor networks* (pp. 74–85). Springer.