

SHANYUE ZHOU

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EDUCATION

Msc. Computer Science, McGill University, Canada

Sep 2024 - Now

GPA: 3.93/4.00

Related Courseworks:

- COMP 565 ML in genomics and healthcare
- COMP 598 Natural Computation

B.Sc. Honours Computer Science, McGill University, Canada

Sep 2019 - Aug 2022

GPA: 3.92/4.00

Graduated with Distinction & First Class Honors

Related Courseworks:

- COMP 597 Applications of ML in Real World Systems
- COMP 400 Project in Computer Science

SKILLS

Programming Languages

Proficient in C, C++, Python, Java, CSS/HTML, MATLAB

Familiar with OCaml, Pascal, C#, R, JavaScript, Beluga

Tools

LaTeX, Solidworks, Git, Docker, Azure

GNU/Linux, Bash, Make, etc.

RESEARCH EXPERIENCES

Masters Thesis - McGill University, 2024 - Now

- Supervised by Prof. Martin Robillard.
- Ongoing research on property-based unit test generation to improve test coverage and fault detection.

Research Project - microRNA language model - McGill University, 2022 - 2024

- Supervised by Prof. Li Yue.
- Explored HyenaDNA's ability to predict miRNA-target interactions using miRNA and mRNA data.
- Improved HyenaDNA's accuracy through fine-tuning and hyperparameter optimization.

Research Assistant - Carleton University & Quantropi Inc, 2022 - 2024

- Analyzed the security and feasibility of a Zero-Key authentication protocol using Zero-Knowledge Proofs.
- Evaluated resistance of proposed cryptographic schemes against quantum attacks.

Research Project - Adaptive Gesture Recognition with Wi-Fi - McGill University, 2022

- Supervised by Prof. Xue Liu.
- Built a user-adaptive CNN model in Python for recognizing hand gestures using Wi-Fi signal variations.

Research Project - Integer Least Squares (ILS) Problems in Communications, McGill University, 2022

- Supervised by Prof. Xiao-Wen Chang.
- Developed a MATLAB implementation of Fast Lattice Point Enumeration for solving ILS problems in communication systems and improved algorithmic efficiency compared to existing reduction techniques.

WORK HISTORY

Teaching Assistant COMP 303 and COMP 330, McGill University	Sep 2024 - May 2025
Software Developer Quantropi Inc	Nov 2022 - Mar 2024
Research Assistant Nanjing Southeast University	Dec 2020 - May 2021
Team Mentor High School Affiliated to Nanjing Normal University	Sep 2019 - May 2020

AWARDS

- MES Bourses d'excellence sci award in McGill, 2020
- Distinction & First Class Honors in McGill, 2022

PUBLICATIONS

- H. Lin, Z. Wang, T. Xu, **S. Zhou**, Y. Hong and J. Huang, "Analysis of Zero-Key Authentication and Zero-Knowledge Proof," 2022 International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery (CyberC), Suzhou, China, 2022, pp. 1-8, doi: [10.1109/CyberC55534.2022.00012](https://doi.org/10.1109/CyberC55534.2022.00012).