Yifan (Steven) Wen

778-952-9969 | yifan.wen@mail.mcgill.ca |https://stevenn2333.github.io/PersonalWeb/

Education

McGill University Montreal, QC, Canada
M.Sc. Computer Science 09/2023 - 12/2024
Relevant Coursework: Deep Learning, Natural Language Understanding with Deep Learning, Applied Machine Learning

Queen's University Kingston, ON, Canada
Bachelor of Science in Computing (Data Analysis) 09/2019 - 05/2023
Relevant Coursework: Analytics & AI for Business, Database Management System, Advance Data Analytics

Research Experience

McGill University Department of Pathology – *Research Assistant* Montreal, QC, Canada

Enhancing Immunohistochemistry Testing Using Digital Pathology and AI 04/2024 – 09/2024

- Enhanced IHC testing by integrating Whole Slide Imaging (WSI) with AI tools (StarDist, YOLOv8) for cell detection and germinal center segmentation.
- Increased test accuracy for cell detection by 15%.
- Applied QuPath for annotation and analysis, improving reproducibility and quality control of KI-67 staining.
- Implemented Slicing Aided Hyper Inference (SAHI) for small object detection in high-resolution pathology images, reducing image processing time by 20%.

BAM Lab – *Research Assistant* Kingston, ON, Canada

Streaming IoT data ingestion pipeline for an advanced data Lakehouse 10/2022 –6/2023

- Developed a pipeline for real-time ingestion of large data streams using Apache Kafka and Apache Nifi, improving data processing speed and enabling near-instantaneous ingestion of large datasets.
- Implemented real-time data storage using MongoDB, enabling immediate access to ingested data, reducing query response times.
- Built a real-time data storage system in lakeFS for post-processing, improving long-term data storage and retrieval efficiency.

Internship Experience

P2L Inc. - *Unity and Web Programmer* Collingwood, ON, Canada
Supervisor: Michael Parker 02/2022 – 01/2024

- Developed a VR Zamboni simulation in Unity, leading UI design (menu, interaction) and back-end (scoring mechanism, driving logic), resulting in a 30% increase in user engagement.
- Collaborated in developing the P2L website, focusing on animations and back-end implementation.
- Developed a play-to-learn game in Unity, custom-designed for clients' needs, handling UI and back-end.

TA Experience

McGill University

- **COMP 206, Introduction to Software Systems** 09/2023 - 12/2023
  Taught programming concepts in C, guiding students in debugging and testing code, and using tools like make and version control.

Queen's University

- **CISC 365, Algorithms** 09/2022 - 12/2022 *Assisted students in understanding and applying algorithm design principles (divide and conquer, greedy approach).*
- **CISC 235, Data Structure** 01/2023 - 04/2023
  Guided students in designing and implementing advanced data structures, helping improve their understanding of complexity analysis.

Skills

Languages: Python (Pandas, Sklearn, PyTorch), Java, C, C#, MATLAB (Machine Learning, Computer Vison), HTML, MySQL, AWS.
Technical: Machine Learning (supervised learning, neural networks), Data Analysis (Pandas, NumPy), Deep Learning (CNNs, RNNs).
Intrapersonal: Strong communication, leadership, and teamwork abilities, demonstrated through TA roles and project management.