David Holcer

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Education

McGill University December 2024
Bachelor of Science in Mathematics and Computer Science

Experience

Front-End Developer Jan. 2025 – Present
McGill University *Montreal, QC*

- Developing a website for social media bot detection research, facilitating state-of-the-art innovation.
- Tech stack: Typescript, Tailwind CSS

Creative Coding Lecturer Jan. 2023 – May 2023, Jan. 2025 – Present
McGill University *Montreal, QC*

- Teaching 50+ university students creative coding through 10 immersive workshops and a personal portfolio of interactive digital art projects. Partnered with the ChengHuai Art and Culture Association.

Data Science Researcher Sept. 2024 – Dec. 2024
McGill University *Montreal, QC*

- Innovating novel next-generation techniques for social media bot creation and detection supervised by Professor Derek Ruths. Research Paper Link.
- Harnessing Artificial Intelligence techniques using prompt engineering and fine tuning of LLMs. Tech stack: Python, Docker, Hugging Face API, Open AI Completion API, Llama LLM

Mathematics & Computer Science Tutor Jan. 2020 – Dec. 2024
McGill University *Montreal, QC*

- Led 20+ students to academic success through individualized tutoring sessions.
- Courses Taught: Calculus, Linear Algebra, Introduction to Computer Science.

Java AP Teacher June 2020 – Oct. 2020
Geek Education *Vancouver, BC*

- Effectively led a student cohort by developing 5 lesson plans, conducting 15 interactive coding demos, and overseeing 10 practical projects.

Software Developer Sept. 2019 - Dec. 2019
McGill Artificial Intelligence Society Machine Learning Bootcamp *Montreal, QC*

- Performed sentiment analysis of published news articles using NLP techniques.
- Tech stack: Python (Pandas, Numpy, Tensorflow, cv2, Sklearn, Seaborn), IBM Watson

Research Intern June 2017 - Sept. 2017
Simon Fraser University *Vancouver, BC*

- Research Topic: *Novel Genomics Data Clustering & Compression Methods* supervised by Dr. Leonid Chindelevitch.
- Achieved a 30% reduction in file size of DNA base pair sequences by developing a Markov Chain clustering algorithm comparing strands' similarities through their compressed representations.

Technical Skills

Coding Languages: Java, Python, C/C++, JavaScript, SQL, Typescript, OCaml, HTML/CSS, OpenGL
Frameworks: React, Node.js, Next.js, Tailwind CSS, Bootstrap
Developer Tools: Docker, AWS, Git, Relational Databases, MySQL, PostgreSQL, MongoDB
Libraries: NumPy, Matplotlib, PyTorch, p5.js, pandas
Skills: Data Science, Mathematics, Public Speaking, Communication, Research, Unit Testing