David Holcer

U.S. Citizen, Canadian PR | ☎ (438) 509-4237 | ✉ david@davidholcer.com

in davidholcer | ⊙ @davidholcer | 🌐 davidholcer.com

EDUCATION

McGill University Sept. 2019 - December 2024

Bachelor of Science in Mathematics and Computer Science

EXPERIENCE

Data Science Researcher Sept. 2024 – Present

McGill University *Montreal, QC*

- Innovating novel next-generation techniques for social media bot creation and detection supervised by Professor Derek Ruths.
- Harnessing Artificial Intelligence techniques and LLMs.
  Tech stack: Python, Docker, Hugging Face API

Mathematics & Computer Science Tutor Jan. 2020 – Present

McGill University *Montreal, QC*

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

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.

NOTABLE PROJECTS

Generative Art | *p5.js, Javascript, Processing, Python* Website Link

- Crafted 10+ interactive generative art pieces using p5.js, color theory, and design principles.
- Taught 50+ university students generative art coding concepts by delivering 10 workshops and demoing p5.js projects.
- Analyzed a dataset of worldwide earthquakes creating a comprehensive infographic map by combining Data Science principles and Processing code.

Coverify.ai | *Spotify API, p5.js, React, Next.js, Tailwind CSS, Javascript* Devpost Link

- Generated cover art reflecting a playlist's ambiance by analyzing songs and using parsed data to create a liquid diffusion simulation algorithm.

WriteMind | *Typescript, React, IBM Watson Natural Language Understanding* Devpost Link

- Innovated a creative writing platform to dynamically alternate music playback based on the sentiment analysis of user inputted text.

StoryWeaver.ai | *co:here API, React, Next.js, p5.js, Tailwind CSS, Javascript* Devpost Link

- Designed a modern front-end website and a dynamic generative art piece.
  Generated personalized, unique, and engaging text narratives.

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, p5.js, pandas
Skills: Data Science, Mathematics, Public Speaking, Communication, Research, Unit Testing