MONTE MAHLUM

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Minneapolis, MN

LinkedIn
Writing & Website
GitHub Repository

Driven and highly curious researcher seeking employment in blockchain, formal verification, machine learning, or technical writing thereof. Passionate about finding and expounding creative solutions to hard problems using higher mathematics.

EDUCATION

University of Minnesota MSc in Mathematics, GPA 3.91 *2024 – 2026*
McGill University BSc in Mathematics and Physics, GPA: 3.45 *2020 – 2024*
Univerzita Karlova Semester Abroad, Local GPA: "Excellent" *2023*
Relevant Coursework (14+ at honours level)
Algebra, Algebraic Topology & Geometry, Algorithms, Category Theory, Differential Geometry, Functional Analysis, Mathematical Logic, Probability, Statistics, Stochastic Processes, Quantum Physics & Computing.

PROFESSIONAL EXPERIENCE

Mathematics Research Assistant, University of Minnesota, Twin Cities *July 2023 –Present*

- Working to ensure convergence of a novel deep learning algorithm developed in [LWL].
- Developed excellent research and writing skills through synthesis and organization of complex ideas. Proved many nontrivial and novel results.
- Paper is unpublished, but available upon request. For reference, please contact Professor Li Wang (liwang@umn.edu).

Mathematics Teaching Assistant, University of Minnesota, Twin Cities *Aug 2024 – Dec 2024*

- Held twice-weekly discussion sessions and office hours on Calculus.
- Strengthened exposition and explanation skills by teaching (and adapting) abstract concepts and rigorous problem solving techniques to students unaccustomed to such modes of thought. (†)

AI Data Trainer, DataAnnotation *May 2024 – Aug 2024*

- Analyzed, annotated and wrote reviews of code written by various AI models.
- Broadened writing, coding, and critical thinking skills.

Calculus I, Probability, and Linear Algebra Tutor, Freelance† *Nov 2023 – April 2024*
Calculus Tutor, JASS Montreal† *Sep 2022 – Dec 2022*

PROJECTS

Directed Reading Program (Mentor) *Sep 2024 – Dec 2024*
Mentored one student through their reading of [B&D]. Example of such work can be found here.
Manifold Institute *June 2024 – July 2024*
Founded summer program teaching middle school students advanced mathematics and physics. Wrote lesson plans and all website content. Program did not come to fruition in 2024, but hopefully in the coming year.
Directed Reading Program (Mentee) *Jan 2024 – August 2024*
Mentorship with Alexis Leroux-Lapierre on categorification following [Savage].
Fibrations Podcast *Sep 2022 – Dec 2023*
Creator and host. Explored academic research at McGill University. Listen on Spotify.
25-Hour McGill Physics Hackathon *Oct 2022*
Analysis of algorithms (one of which novel) for the Laplace Equation. Submission can be viewed here.

SKILLS AND LANGUAGES

English (Native), Spanish, Python (see Repository), Java, JSON, Latex, Jiu Jitsu, drums, piano.