Kyle Bower

Data Scientist/Machine Learning Engineer

Highly skilled PhD candidate in Mathematics with a strong background in data science and machine learning. Demonstrated expertise in developing advanced mathematical models and algorithms to solve complex problems. Extensive experience in programming languages such as Python, R, and MATLAB. Seeking a challenging role in data science or machine learning where my mathematical expertise and analytical skills can be leveraged to drive data-driven decision-making and innovative solutions.

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in linkedin.com/in/kylewbower

WORK EXPERIENCE

Head Graduate Teaching Assistant
University of Toronto

2017 - Present   *Toronto, ON*

Achievements/Tasks

- Developed a script to automatically assign 1,500+ students to tutorial groups. (Python)
- Mentored 100+ students each term in weekly tutorials, held office hours, invigilated exams, and graded tests for undergraduate math courses.
- Led orientation and regular training for aspiring and new teaching assistants.

Cryptanalyst Intern
Communications Security Establishment

2017   *Ottawa, ON*

Achievements/Tasks

- Performed cryptologic research, designed, developed, assessed, and attacked cryptographic algorithms and protocols to support Government of Canada Intelligence and Cyber Defense requirements.
- Attended the Selected Areas in Cryptography Summer School at the University of Ottawa to learn about symmetric key, public key, and post-quantum cryptography.

Undergraduate Researcher
Natural Sciences and Engineering Research Council of Canada

2016   *Vancouver, BC*

Achievements/Tasks

- Conducted independent research on the Min protein system involved in bacterial cell division under the supervision of Dr. Eric Cytrynbaum.
- Simulated cell-scale biochemical reactions to capture the natural stochasticity of a biological cell. (Smoldyn)
- Employed numerical methods to solve a system of partial differential equations that described the biochemical reactions occurring in the cell. (MATLAB/GNU Octave)

EDUCATION

PhD - Mathematics
University of Toronto

2018 - Present   *Toronto, ON*

MSc - Mathematics
University of Toronto

2017 - 2018   *Toronto, ON*

BSc - Honours Physics and Mathematics
University of British Columbia

2013 - 2017   *Vancouver, BC*

THESES

PhD: Fast Computation of Electrostatic Potentials for Piecewise Constant Conductivities

MSc: Iterative Methods for the Poisson-Nernst-Planck Equations

BSc: Steiner Minimal Trees for Small Sets of Points in R^n

TECHNICAL SKILLS

Programming Languages:
Python, MATLAB, R, SQL

Operating Systems:
Windows, MacOS, Linux

Other Software/Tools
Git, Scikit-learn, Matplotlib, TensorFlow, Jupyter, Excel

INTERESTS

Artificial Intelligence

Science

Reading

Sports