POSITION: JUNIOR ENGINEER – ARTIFICIAL INTELLIGENCE
Location: Lady Davis Institute for Medical Research - Jewish General Hospital

Appointment Term: 1-year term, with possibility of extension
Appointment Start Date: Immediate

Summary of Position
The laboratory of Dr. Alan Spatz in the Department of Pathology, Faculty of Medicine, McGill University and located at the Lady Davis Institute for Medical Research of the Jewish General Hospital is currently seeking a talented engineer to join an exciting research project.

This position will leverage artificial intelligence (AI) and machine learning (ML) to drive innovation and make a real-world impact in the healthcare system. The ingineer will help shape our AI strategy to predict early-stage clinical treatment, survival of the patient, clinical cancer diagnostic, personalized medicine for cancer patients and help pathologists to provide results quicker by using patient's digital tissue information. This position will use ML to develop new applications and algorithms to guide and achieve this goal with the help of digital tissue section images of different type of cancers and clinical information of the patient. Developed algorithms will be used in the clinic as a diagnostic tool showing the potential of AI ito support the healthcare system.

Primary Duties and Responsibilities

- Leverages AI and ML techniques to develop and deploy innovative solutions that improve outcomes in the healthcare system, ensuring patient privacy and data security requirements are met.
- Collaborates with cross-functional te ams, including data scientists and software engineers, to integrate AI solutions into existing products and services across various prioritized use cases within the healthcare system AI roadmap.
- Develops and implements machine learning models and algorithms to solve complex heath issue, problems and enhance AI-driven applications.
- Models, builds, and tests AI software to ensure it can handle large volumes of data and deliver desired outcomes.
- Converts AI/ML models into APIs that can be utilized by other developers to enhance application functionality.
- Conducts comprehensive data analysis, preprocessing, and feature engineering to extract valuable insights from large datasets, thereby improving model performance.
- Optimizes AI models for performance, scalability, and efficiency by leveraging cloud-based resources and distributed computing frameworks.
- Actively participates in code reviews and collaborative problem-solving sessions to contribute to the improvement of AI solutions and development processes.
- Troubleshoots and resolves AI-related issues, ensuring the reliability and accuracy of AI-driven applications.

Minimum Qualifications

- PhD in Computer Science or any other applicable field, Data Science, Bioinformatics or related field required
- 1-2 years minimum experience as an AI Engineer or ML learning in a similar role

Knowledge, Skills, and Abilities

- Sound understanding of patient privacy and data security requirements, with direct experience applying AI in healthcare being a plus
- Superior written and presentation skills to effectively communicate complex AI concepts and solutions.
- Proficiency in programming languages Python, pandas, SQL, development, packaging and use of CLI tools (optional: javascript, cloud storage, micro-services)
- Basic knowledge of healthcare data standard and medical terminologies
- Experience building and deploying machine learning models in real-world settings
- Ability to work cross-functionally with healthcare professionals to identify and address their needs
- Excellent problem-solving skills and ability to thrive in a demanding, fast-paced work environment

Job Type: Full-time, 35h/week

Annual salary: Salary for this position will be commensurate with experience

We are committed to providing equal opportunities in employment. We value diversity and do not discriminate on the basis of race, religion, color, national origin, gender, sexual orientation, age, marital status, or disability status.

For prompt consideration, please email the following items to Dr. Alan Spatz (alan.spatz@mcgill.ca):

- Cover letter (including a statement of research interests and prior experience in related research)
- CV with bibliography
- Contact information for 2 references