Postdoctoral Research Fellowship
Data Science and Deep Learning

Hasso Plattner Institute for Digital Health
Icahn School of Medicine at Mount Sinai

We are inviting applications for a Postdoctoral Research Fellowship position in data science and deep learning with a specific interest in applications to electronic health records (EHR) and genomics.

This position will be jointly held between the Charles Bronfman Institute for Personalized Medicine and the newly formed Hasso-Plattner Institute of Digital Health, both at the Icahn School of Medicine at Mount Sinai in Manhattan, New York, NY, USA.

These institutes have a vested interest in using advanced data science methodologies to push forward precision medicine. Key topics of interest include but are not limited to: predictive modeling for disease outcomes and personalized therapeutic recommendations, working with common data model EHR standards (e.g., OMOP), multi-modal (e.g., genomics, imaging, and clinical data) deep learning for clinical decision support, unsupervised learning to discover biologically-relevant disease subtypes, transforming real-world data to real-world evidence for supporting regulatory decisions, cost and comparative effectiveness for medicine in practice, and methods development to facilitate a learning health system, among others. We have an interest in many disease domains including nephrology, cardiology, radiology, psychiatry, and others.

Dr. Girish Nadkarni and Dr. Benjamin Glicksberg will jointly supervise the successful candidate. The candidate will have the opportunity to work with unparalleled data and computational resources. Data resources include (a) Access to >8 million patient records in the Mount Sinai Data Warehouse; (b) The BioMe Biobank Program with >30,000 patients with whole exome sequencing data linked to longitudinal clinical data; (c) The in-progress digital health intelligence cohort which will link sensor (i.e., wearables) and patient reported data to genetic and clinical data in over 10,000 patients; and (d) various types of imaging data (e.g., MRI, x-ray). He or she will have the opportunity to develop their own research projects and to lead or participate in local as well as international collaborations. As advisors, we actively encourage the professional development of our lab members and facilitate presentation of exciting findings in pioneering conferences.

The postdoctoral fellow will join a dynamic team of data scientists, geneticists, and clinicians and participate in unique opportunities to apply deep learning for important scientific breakthroughs and to directly impact patients' lives in a clinical setting.

The ideal candidates will have the following background:

1. PhD, MD, or MD/PhD in a quantitative science-related field (e.g., biomedical informatics, clinical informatics, machine learning, biostatistics, genetics, etc.)
2. Significant experience in machine learning techniques is preferred, ideally with published work and/or code available. Expertise with deep learning frameworks is preferred (e.g.,, Tensorflow, PyTorch, Keras).
3. Expertise with programming and statistical software experience in R and/or Python.
4. Formal statistics or epidemiological training is a strong advantage.

5. Excellent publication track record.
6. Strong communication and presentation skills with fluency in spoken and written English.

To apply, please submit a CV and a brief cover letter to datatoclinic@gmail.com.

Information on the Postdoctoral Training Program at Mount Sinai:
http://icahn.mssm.edu/education/postdoctoral-training. To learn more about the Icahn School of Medicine at Mount Sinai: http://icahn.mssm.edu.Incoming postdoctoral fellows are eligible for affordable Mount Sinai Housing within walking distance of the medical school and of a wide range of amenities as well as visa sponsorship on a case-by-case basis.

About Our Organization: The Icahn School of Medicine at Mount Sinai is internationally recognized as a leader in groundbreaking clinical and basic science research and is known for its innovative approach to medical education. With a faculty of more than 3,400 in 38 clinical and basic science departments and centers, Mount Sinai ranks among the top 20 medical schools in receipt of National Institutes of Health grants. In its 2015 "America's Best Graduate Schools" issue, U.S. News & World Report ranks the Icahn School of Medicine 14th out of 130 medical schools nationwide. Mount Sinai Medical Center is an equal opportunity/affirmative action employer. We recognize the power and importance of a diverse employee population and strongly encourage applicants with various experiences and backgrounds. Mount Sinai Medical Center--An EEO/AA-D/V Employer.

Keywords: Genomics, Genetics, DNA, Imaging, Artificial Intelligence, Multi-omics, Electronic Health Records, Electronic Medical Records, Common Data Models, Causal Inference, Network Biology, Time Series Analysis, Predictive modeling, Deep Learning, Machine Learning, Data Science, Generative Modeling, Clustering, R, Python, Precision Medicine, Personalized Medicine.