ML Performance Engineer, Drug Discovery

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Type: Full-Time
Salary: $75,210 - $106,230 per year
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Category: Laboratory and Research

Northeastern University



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About the Opportunity

This is a 1-year fixed term position, renewal is based on available external funding.

About the Institute

Do you want to be part of an exciting new Institute focused on combining human and machine intelligence into working AI solutions?

We are building a pioneering research and innovation hub in AI-one that will shape the way humans and machines collaborate for decades to come. Led by Prof. Alan Mislove, the Institute for Experiential AI is built around the challenges and opportunities made possible by human-machine collaboration. The Institute provides a framework to design, implement, and scale AI-

driven technologies in ways that make a true difference to society. Our ability to respond to the opportunities afforded to society will depend on training and building a workforce that is AI-capable and prosperous.

Founded in 1898, Northeastern is a global research university and the recognized leader in experience-driven lifelong learning. Our world-renowned experiential approach empowers our students, faculty, alumni, and partners to create impact far beyond the confines of discipline, degree, and campus.

The Culture

Here at the Institute for Experiential AI (EAI) we are committed to the highest standards in all we do. Working at the EAI offers opportunities, an environment, and a culture that just isn't found together anywhere else. This is the right place for you if you're curious, motivated by the future of technology, and want to be part of a unique and diverse community that works on high-impact research, educational, business, and societal problems.

Job Summary:

Northeastern University's Institute for Experiential AI has established a position for a ML Engineer (MLE) with the AI and Life Sciences team. The MLE will be based out of the Boston campus, MA, conduct applied research, prepare work for submission to journal/conference publications, and contribute to extramural funding applications. This position has a one-year appointment, renewable yearly subject to availability of funding. The MLE will work on projects that will include applications of neural networks to efficacy and potency prediction for drug combinations using multimodal datasets including molecular features of drugs and biological fingerprints of cancer cell lines. Participation in these projects will include scientific programming, data analysis, manuscript preparation, meeting with collaborators, mentoring graduate students, etc.

In particular, the MLE hired for this position will work with Ayan Paul and Hyunju Kim at EAI and is expected to develop AI algorithms for drug synergies with a combination of public and proprietary data, work with graduate students working on the same project, and collaborate with academic and industry partners of EAI. The MLE will actively collaborate on projects with other research labs at Northeastern University and an industry partner. The position is expected to start by January 2026.

Minimum Qualifications, Values & Abilities needed for this Role

- An MS in computer science, computational biology, or bioinformatics with a heavy focus on machine learning and AI model training and development by the appointment start date.
- About 1 year of research or work experience in an academic group. Corporate experience will be considered if it is aligned with the job role
- A record of outstanding research, as evidenced by software outputs, and other scholarly measures of impact.

- Strong demonstrable background in machine learning. Must have demonstrable experience in building AI models for alternative splicing.
- Must have 1+ years of experience in computational approaches and datasets used in drug efficacy and toxicity predictions.
- Must have familiarity with data generated by cell screening assays, cell painting, and cheminformatics.
- Must have experience in research software development, FAIR data/open science, life sciences data systems, and analysis of various kinds of omics data (e.g., metabolomics, proteomics, genomics, transcriptomics, etc.).

Values & Abilities:

- We expect ML Performance Engineers to establish and advocate for best practices in scientific reproducibility of all results, and to promote the ethical use of data and algorithms.
- Excellent written and verbal communication skills.
- Respect for diversity and the importance of interdisciplinary teams.
- Entrepreneurial mindset, self-starter, and innovative thinker while at the same time being able to navigate multi-layered channels within a university setting and work across multiple projects.
- Team-player who can collaborate effectively in a university setting and with corporate partners.
- Open-minded, assertive, and professional when collaborating and working within our team and with other groups within Northeastern University.

Required Documents:

Please submit the following documents in a **single Word/PDF document** along with your application:

1. Cover Letter

2. Resume (Please include contact information of referees for at least three letters of reference)

Key Responsibilities & Accountabilities

- **(90%)** Co-develop, collaboratively lead and participate in research projects that advance scientific knowledge and solve relevant societal and industrial problems. Participation in these projects will include working with graduate or undergraduate students, scientific programming, data analysis, manuscript preparation, meeting with collaborators, etc.
- **(5%)** Represent the university in conferences, seminars, and other public events.
- **(5%)** Other assignments as deemed necessary.

Position Type

Research

Additional Information

Northeastern University considers factors such as candidate work experience, education and skills when extending an offer.

Northeastern has a comprehensive benefits package for benefit eligible employees. This includes medical, vision, dental, paid time off, tuition assistance, wellness & life, retirement- as well as commuting & transportation. Visit https://hr.northeastern.edu/benefits/ for more information.

All qualified applicants are encouraged to apply and will receive consideration for employment without regard to race, religion, color, national origin, age, sex, sexual orientation, disability status, or any other characteristic protected by applicable law.

Compensation Grade/Pay Type:
110S

Expected Hiring Range:
$75,210.00 - $106,230.00

With the pay range(s) shown above, the starting salary will depend on several factors, which may include your education, experience, location, knowledge and expertise, and skills as well as a pay comparison to similarly-situated employees already in the role. Salary ranges are reviewed regularly and are subject to change.

To apply, visit https://northeastern.wd1.myworkdayjobs.com/en-US/careers/job/Boston-MA-Main-Campus/ML-Performance-Engineer--Drug-Discovery_R138266

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