Senior Research Engineer - Machine Learning Systems
University at Buffalo

Job Title	Senior Research Engineer - Machine Learning Systems
Department	Institute for Artificial Intelligence & Data Sciences
Institution	University at Buffalo Buffalo, New York
Date Posted	Mar. 17, 2025
Application Deadline	11/21/2025
Position Start Date	Available immediately
Job Categories	Research Scientist/Associate
Academic Field(s)	Computer Science
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Job Description	

Senior Research Engineer - Machine Learning Systems

Position Information

Position Title: Senior Research Engineer - Machine Learning Systems
Department: Institute for Artificial Intelligence & Data Sciences
Posting Link: https://www.ubjobs.buffalo.edu/postings/54281
Job Type: Full-Time

Posting Detail Information

Position Summary

UB is seeking a **Senior Research Engineer** with deep expertise in areas such as Artificial Intelligence (AI)/machine learning, AI engineering, AI infrastructure, hybrid cloud computing, and parallel programming with GPUs, to work at the Institute for Artificial Intelligence and Data Science (IAD). As a Senior Research Engineer, you should be experienced in the development of scalable AI systems and deployment of distributed ML models, and will be expected to collaborate with researchers across domains. This role includes opportunities to work with state-of-the-art natural language processing, large language models (LLMs), computer vision models, speech models, time series models, and many other related machine learning models, managing AI infrastructure, and optimizing distributed model training and inference.

The IAD at the University at Buffalo is a leader in advancing AI, data science, and computational research. IAD fosters innovation by addressing pressing challenges in areas such as education, health care, robotics, and autonomous vehicles, contributing to the future of the U.S. economy and security. This role offers the opportunity to contribute to UBs pioneering work at the intersection of AI and data science, collaborating with experts to drive advancements that make a lasting societal impact.

Key Responsibilities:

- Design and develop full-stack end-to-end AI solutions to support IADs missions.
- Collaborate with UBs various decanal units to understand the requirements of AI solutions and build the solutions accordingly.
- Lead system architecture discussions and the design of the full-stack solution architecture, including front-end, back-end, and cloud deployment (such as AWS, GCP).
- Design, maintain, and optimize AI infrastructure to support the test and deployment of AI solutions, including distributed ML training and inference.
- Under the guidance of faculty members, work with and deploy machine learning models (including LLM models) into both on-prem systems and hybrid clouds, ensuring efficient integration into production environments.
- Build and maintain scalable, real-time data pipelines and MLOps workflows.
- Mentor junior engineers to build the AI solutions with robust system performance.

Outstanding Benefits Package
Working at UB comes with benefits that exceed salary alone. There are personal rewards including

comprehensive health and retirement plan options. We also focus on creating and sustaining a healthy mix of work, personal and academic pursuit - all in an effort to support your work-life effectiveness. We support your growth and development through our career coaching and training department and we qualify as a public service loan forgiveness organization. Learn more about our **benefit packages**.

About The University at Buffalo

The University at Buffalo (UB) #ubuffalo is one of Americas leading public research universities and a flagship of the State University of New York system, recognized for our excellence and our impact. UB is a premier, research-intensive public university dedicated to academic excellence. Our research, creative activity and people positively impact the world. Like the city we call home, UB is distinguished by a culture of resilient optimism, resourceful thinking and pragmatic dreaming that enables us to reach others every day. Visit our website to learn more about the **University at Buffalo**.

As an Equal Opportunity / Affirmative Action employer, the Research Foundation will not discriminate in its employment practices due to an applicants race, color, religion, sex, sexual orientation, gender identity, national origin and veteran or disability status.

Minimum Qualifications

- Bachelors degree in Computer Science, Engineering, or a related field.
- 3 years of software engineering (end-to-end full-stack development) and machine learning experience (industry or academia), or an equivalent combination of education and experience
- Expertise in programming languages such as Python, Golang, and C++ and web development tools such as React, React Native, HTML/CSS/Javascript.
- Expertise in PyTorch, TensorFlow, distributed ML training, inference, and MLOps tools.
- Proficient in AI infrastructure, high-performance computing, cloud platforms (AWS, GCP), and parallel programming with GPUs.
- Knowledge of cloud technologies such as containerization (Docker, Kubernetes) and big data technologies (Hadoop, Spark).

Preferred Qualifications

- Masters degree in Computer Science, Engineering, or a related field
- Research project experience and academic publications.
- Experience with multimodal data and data pipeline creation.
- Experience in working with and deploying LLM and LVLM models.

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- Strong problem-solving, communication, and collaboration skills.

Physical Demands

Salary Range
$100,000 - $125,000

Special Instructions Summary

Is a background check required for this posting?
No

Contact Information

Contact's Name: Virginia Stever
Contact's Pronouns: she/her/hers
Contact's Title: Administrative Director
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Posting Dates

Posted: 11/21/2024
Deadline for Applicants: Open Until Filled
Date to be filled: 02/01/2025

Contact Information

Please reference Academickeys in your cover letter when
applying for or inquiring about this job announcement.

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Contact

N/A

University at Buffalo

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