Job Title: Research Intern (LLM foundations) – Falcon LLM Team

Location: Technology Innovation Institute, Abu Dhabi, UAE

Technology Innovation Institute (TII) is a publicly funded research institute, based in Abu Dhabi, United Arab Emirates. It is home to a diverse community of leading scientists, engineers, mathematicians, and researchers from across the globe, transforming problems and roadblocks into pioneering research and technology prototypes that help move society ahead.

Artificial Intelligence Cross-Center Unit

The Artificial Intelligence Cross-Center Unit is the machine learning powerhouse of TII, working in close collaboration with our other research centers to harness the full benefits of AI across our projects – and drive innovation from new computing paradigms, designing and delivering new AI methodologies, technologies, solutions, and systems that address challenging issues across multiple sectors of the economy – from technology to healthcare, cybersecurity, and government, among others.

We incorporate core elements of intelligence (perception, sensing, planning, and language) in the ideation, design, and prototyping of next-generation systems with human-like intelligence. We build advanced AI computing and scalable AI-based software stacks and hardware systems to deliver significant enhancements in systems infrastructure. Our AI researchers, scientists, and engineers collaborate to ensure innovative outcomes, from AI theory to AI technologies towards better intelligence.

Falcon LLM Team

The Falcon LLM team at the Technology Innovation Institute (TII) is at the forefront of developing cutting-edge generative AI and language models. Our Falcon models have garnered significant open-source adoption, and we are committed to pushing the boundaries of AI performance, alignment, and safety. Join our dynamic team to advance the capabilities of our foundational models and make impactful contributions to the AI community.

Role Overview:

As a Research Intern on the Falcon team, you will help push the boundaries of generative AI and large language models (LLMs). Your work may focus on one or more areas, such as novel architecture design, large-scale training infrastructure, efficient training methods, LLM data research and large-scale processing, or post-training and reasoning. This internship offers a unique opportunity to collaborate with leading researchers and cross-functional teams, contributing to high-impact projects that advance both academic research and real-world AI applications.

Key Responsibilities (depending on research topics):

- **Innovate:** Design, develop, and implement novel approaches to optimize LLM performance, efficiency, and scalability.

- **Experiment & Iterate:** Run experiments, analyze results, and refine methods to achieve continuous improvements.
- **Collaborate:** Work closely with researchers and engineers across disciplines, ensuring clear communication of research goals, progress, and outcomes.
- **Stay Current:** Keep up with the latest advances in LLMs, generative AI, and system-level ML optimizations, and translate them into practical improvements.
- **Contribute to the Field:** Support publications in top-tier conferences and journals, and actively engage with the broader AI research community.

Minimum Qualifications:

- Ph.D. student or final-year Master's student in Computer Science, AI, ML, Applied Mathematics, or a related technical field.

- Strong proficiency in Python and C++, with proven experience in scalable software development.

- Strong analytical and problem-solving skills with a drive to understand and improve the underlying mechanics of model performance.

- Deep curiosity and ownership mindset—willing to dig into metrics, logs, and performance reports to drive improvements.

- Eligible for an internship of at least six months, with university supervisor approval.

Preferred Qualifications:

- Research experience in **fundamental LLM research**, in areas such as data, infrastructure, model design, optimization, reasoning, or agents.

- Demonstrated contributions to **open-source projects** in ML, deep learning, or systems optimization.

What we offer:

- Competitive Benefits: Receive a highly competitive compensation package, access to state-of-the-art computational resources, and the opportunity to collaborate with some of the brightest minds in AI.

- Internship Perks: We cover round-trip flights, accommodations, health insurance, and provide access to cutting-edge equipment and workspaces.

- Mentorship and Project Involvement: Benefit from close mentoring and active participation in exciting AI projects that will help you grow your skills.

- Equal Opportunity: We are committed to creating a diverse and inclusive workplace. TII values diversity and does not discriminate based on race, religion, gender, age, national origin, sexual orientation, marital status, veteran status, or disability.