Research Assistant – Machine Learning

About Us:
We are a research lab dedicated to advancing machine learning through cutting-edge research and experimentation. Our work spans the development of novel AI models, experimental frameworks, and scalable infrastructure to support our research initiatives. As our projects grow in complexity, we are looking to expand our technical capabilities to improve efficiency, scalability, and overall research productivity.

About the Role:
We are seeking a **Research Assistant** with a strong software engineering and machine learning background to support the development and maintenance of critical software infrastructure for our machine learning research. This role will involve designing and optimizing cloud-based workflows (primarily on Google Cloud Platform), improving software systems to support experimentation, and developing tools to streamline AI model development. The selected candidate will work closely with researchers to enhance the entire research pipeline, from data processing to model deployment.

This is an **hourly paid** position, with compensation based on experience and university pay scales. The expected commitment is **15-20 hours per week**, with flexibility depending on project needs.

Must-Have Skills:

- Proficiency in Python and software development best practices
- Experience with cloud platforms (preferably GCP) and workflow automation
- Strong problem-solving skills and ability to work independently
- Understanding of backend development and API integration
- Prior projects or professional experience with Python, PyTorch/TensorFlow, Hugging Face, or other relevant libraries
- Currently enrolled or completed **at least two** of the following courses (or equivalent experience):
    - **CSCI 559: Machine Learning I: Supervised Methods**
    - **CSCI 567: Machine Learning**
    - **CSCI 561: Foundations of Artificial Intelligence**
    - **CSCI 544: Applied Natural Language Processing**
    - **CSCI 571: Web Technologies**

Preferred Skills:

- Frontend development experience (React, Next.js, or similar)
- Familiarity with ML/AI workflows and experimentation frameworks
- Experience with database management and optimization
- Previous experience in a research or academic environment
- Not required but highly preferred coursework:
    - **CSCI 644: Natural Language Dialogue Systems**
    - **CSCI 534: Affective Computing**

How to Apply:
Interested candidates should send the following documents via email to **burbidge@usc.edu** / **darpan.jain@usc.edu** with the subject line **"Application: Research Assistant – Machine Learning"**

- A **CV/resume** highlighting relevant experience
- A **short paragraph** highlighting your relevant experience and skills for this role
- Links to **GitHub, LinkedIn, personal website/technical blog, or any relevant project links** (if available)

Applications will be reviewed on a rolling basis until the position is filled. We look forward to hearing from you!