

Company: Yonder Materials

Location: Clean Energy Testbeds, Seattle, WA

Contact: Chris Ashfield, email: chris@yondermaterials.ai

Job Title: Software Project Lead (Part-time Graduate Student Opportunity) - Electrochemistry and Robotics Control Application

Job Description:

We are seeking a motivated and detail-oriented **Graduate Student** to take on the role of **Software Project Lead** for the development of a cutting-edge **Streamlit-based application**. This application will streamline **electrochemistry experiments** and **robotics control** for laboratory users, while also managing data uploads to a MySQL-based data warehouse.

This opportunity is ideal for a graduate student with a passion for combining software development, scientific research, and data management in a collaborative, agile environment.

Key Responsibilities:

Project Leadership

- Collaborate with researchers and lab technicians to gather requirements and refine the application's functionality.
- Manage sprint cycles, PRs, testing, and code quality
- Lead the development of a user-friendly interface for running experiments and controlling robotics in a lab environment.
 - Manage at least 1 undergraduate developer
- Work with a small, cross-disciplinary team, ensuring timely progress through agile development practices.

Software Development

- Build and maintain the Streamlit application to integrate electrochemical experiment workflows with robotic controls.
- Develop backend systems to facilitate real-time communication with lab equipment and process experimental data.
- Ensure seamless integration of experimental results into a MySQL-based data warehouse.

Data Integration and Management

- Add features and schemas to MySQL database to store and manage experimental data.
- Create automated workflows to clean, process, and upload data from electrochemical experiments to the database.
- Support data analysis by ensuring the data warehouse is optimized for querying and visualization.

Quality Assurance

- Adhere to software development best practices, including thorough testing, documentation, and version control.
- Conduct usability testing with lab users to refine the application.
- Prioritize system performance, scalability, and security to meet lab standards.

Communication and Reporting

- Provide progress updates to supervisors and stakeholders in regular project meetings.
- Document workflows, application architecture, and user guides to facilitate knowledge transfer.

Qualifications:

Required Skills:

- Strong programming skills in Python, with experience in frameworks like Streamlit or Dash.
- Understanding of SQL and database design, with proficiency in MySQL.
- Ability to quickly learn new domains, such as electrochemistry and robotics control.
- Strong organizational skills, with the ability to balance multiple responsibilities.
- Excellent verbal and written communication skills for effective collaboration with multidisciplinary teams.

Preferred Skills:

- Internship or project experience in an **agile development environment**.
- Knowledge of electrochemistry, laboratory automation, or robotics systems.
- Familiarity with ETL processes for data integration and workflow automation.

- Background in STEM disciplines such as chemistry, physics, computer science, or engineering.

Application:

- To apply, send your resume to Chris Ashfield (chris@yondermaterials.ai)