Thesis Project Topic: Exploring Software Bug Detection and Repair Using Large Language Models by Mining Unstructured System Logs

We are seeking a motivated student to undertake a master thesis project focused on leveraging large language models (LLMs) to detect and repair software bugs by mining unstructured system logs. This project aims to explore how LLMs can be applied to analyze system logs for identifying software bugs and providing automated repair suggestions, contributing to more robust and efficient software systems.

Ideal Candidate:

- Strong interest in software debugging, machine learning, and log analysis.
- Familiarity with system logs, software bugs, and unstructured data processing.
- Basic knowledge of large language models (e.g., GPT, CodeBERT) and their application in text mining and natural language processing.
- Strong analytical skills and a problem-solving mindset, with an interest in exploring advanced techniques for bug detection and repair automation.

If you are passionate about using machine learning techniques to improve software quality by mining system logs and are eager to contribute to innovative research in this area, please contact derui.zhu@tum.de with your resume and transcript.