

Explainable AI for Source Code Applications

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sdmay25-30

Overview

- Client/Company: Dr. Ali Jannesari/ISU SWAPP Lab
- Abstract:
 - Focus on auto-labeling code datasets using AST tools, regular expressions, and LLM-generated labels.
- Goal:
 - Enhance model interpretability by evaluating learned concepts against human-defined code properties.

Problem Statement & Users

- Problem:
 - Current AI models for source code lack clear interpretability, hindering trust and understanding.
- Users:
 - ML Researchers and Engineers
 - People experimenting ML models
 - Prompt Engineering Researchers
 - Researches optimizing prompts with ML models
 - Researchers working with HPC
 - HPC researches experimenting with ML

User Needs

- Software:
 - All of these users require a working software library to run their workloads
 - It must be compatible with the HPC platform they are using
- Hardware:
 - High performance computing clusters

Conclusions

- Comparison:
 - The users have different reasons for why they are working on what they are, but have most of the same needs.
 - Different users will need to fine tune their use of the product for their own use case.