



# Generating Test from NL

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# Introduction

- Importance of Testing
- Challenges in Open-Source Software
- Proposed solution



# Research Question

- How can natural language processing (NLP) be harnessed to automate test generation and enhance test coverage from comments and docstrings in open-source software projects?
  - Recent LLM



# Key Idea

- The central premise of this project is to harness the capabilities of recent advancements in large language models (LLMs) for the generation of test cases in OSS.
- Promote Reusability
- Improve Code Quality
- Improve Research ?



# Evaluation Plan

- Test Coverage: Percentage increase in code coverage.
- Bug Detection: Identification of previously undetected defects.
- Precision and Recall: Accuracy and completeness of the test cases in relation to the documented behavior.
- Developer Feedback: Insights from developers on the usability and effectiveness of the generated tests.

# WEC-GRID

- Open-source bridge tool for Modeling Wave/Current Energy Converts on the Power Grid

