



Evaluating AI Code Assistants for Enhanced Software Development in CTBTO: A Modular Approach



Evangelos Dellis

Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)

P4.3-576

- We evaluate Al Code Assistants and Agents that can be deployed in our GPU infrastructure
- You will learn that an Al coding Assistant/Agent:
 - o is a **tool** that uses a LLM that is fine-tuned for coding tasks and for "tool-use"
 - o predictability and agency **affects** the coding task
 - o augmentation vs automation → when to use which option
- ➤ We explore various types of AI Coding tools connected to our CTBTO codebase:
 - o what is an Al IDE & Copilot?
 - o how to use a CLI-based agent?
 - o what is a Teammate or SWE-agent?
 - learn about SWE-bench → the de-facto coding benchmark
- Learn how to use an autonomous SWE-Agent:
 - that is open-source (including the LLM)
 - o running locally in your GPU infrastructure
 - and solves real issues!







