Progetto di ricerca

This project proposal seeks to harness the power of Big Code and Artificial Intelligence (AI) to aid in the education of economically disadvantaged students studying Information Technology (IT). By creating AI-powered tools that generates and understands code, we aim to democratize access to advanced coding education, promoting inclusivity and diversity in the digital landscape.

Piano delle attività.

The candidate will work at the following tasks.

1. **AI-Powered Coding Assistant**: Developing a AI-powered coding assistants capable of auto-generating code snippets based on natural language prompts. This tool will use AI models trained on a large corpus of code (Big Code) and will allow students to understand the relationship between human language and programming languages, thus lowering the entry barrier for learning new coding languages.

2. **Code Understanding and Analysis**: Leveraging Natural Language Processing (NLP), the AI tools will also be able to provide explanations and analysis for existing source code. It will be able to translate the source code into natural language descriptions, aiding students in understanding complex code structures and patterns.

3. **Online Learning Platform**: We will create an accessible online learning platform where students can interact with the AI tool, engage in peer-to-peer learning, Hackathons, and access a vast repository of code examples and learning resources.