

LLM for code and proof

**ECTS** : 4

**Volume horaire** : 24

**Description du contenu de l'enseignement :**

Recent advances in large language models (LLMs) have enabled remarkable progress in program synthesis and code generation. This course explores the foundations and methodologies behind modern neural code generation, with a particular focus on Transformer-based architectures and LLM techniques.

**Compétence à acquérir :**

The course has two main objectives: (1) to provide students with a deep understanding of the core techniques for training and fine-tuning neural models for code generation, including inference strategies and evaluation metrics specific to code, and (2) to introduce current research in neural program synthesis, highlighting applications in software engineering, reasoning, and formal verification.

**Mode de contrôle des connaissances :**

Homeworks and projects

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