



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### The Transformer architecture: variants and applications

2425-114R-02

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#### Title

The Transformer architecture: variants and applications

#### Teacher(s)

Alessandro Raganato

#### Language

English

#### Short description

##### Course Organization:

The course will consist of 4 sessions, each lasting 4 hours, conducted over the first two weeks of February.

##### Course Overview:

This course offers an in-depth exploration of the Transformer architecture, its various extensions, and practical applications. Beginning with a comprehensive review of the original Transformer model, the course will progress to cover recent advancements and specialized variants designed to address challenges in different domains.

**Course Materials:**

Provided by the instructor.

**Final Evaluation:**

Students may choose one of two options for their final evaluation:

1. Hackathon Mode: Complete a simple project on a topic related to Transformers, which will be presented briefly on the final day of the course only. This option encourages practical application and hands-on problem-solving.
2. Presentation Mode: Choose a research paper, in coordination with the lecturer, and deliver a presentation on it. This can be done at any agreed-upon time, allowing students to dive deeper into a specific aspect of the Transformer architecture or its applications.

**CFU / Hours**

2 CFU / 16 hours

**Teaching period**

February 2025

**Sustainable Development Goals**

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