UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Efficient Algorithms (16h lezione)

2627-114R-ALGO

Title

Efficient Algorithms

Teacher(s)

Paola Bonizzoni, Yuri Pirola, Raffaella Rizzi

Language

English

Short description

You must enrol at least one week before the first lecture.
If you are unable to enrol, send an email to the teacher(s).

The content of the course is the following

1. IIntroduction to text indexing: Suffix Trees, Suffix Arrays
2. Enhanced suffix arrays
3. Burrows-Wheeler Transform (BWT), FM-index

4. Probabilistic filters and data structures
5. Sketching data streams
6. MinHashing
7. Suffixient sets

The exam consists in exercises, that can be solved by small groups of students.
Each student must write individually a detailed solution of the exercises.
We expect the student to have a clear understanding of basic algorithms and data structures, such as those presented in the undergraduate Algorithms courses

CFU / Hours

2 CFU.
The course consists of 16 hours of lectures. No lab activities is planned.

Teaching period

January 2027

Sustainable Development Goals

QUALITY EDUCATION