UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Efficient Algorithms (16h lezione)

2627-114R-ALGO

Titolo

Efficient Algorithms

Docente(i)

Paola Bonizzoni, Yuri Pirola, Raffaella Rizzi

Lingua

English

Breve descrizione

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. Introduction 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 / Ore

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

Periodo di erogazione

January 2027

Sustainable Development Goals

ISTRUZIONE DI QUALITÁ