Introduction to Algorithms and Data Structures

Semester 2 Introduction
Welcome back!
In Semester 1, we saw

• Sorting (InsertSort, MergeSort, QuickSort, HeapSort)

• Asymptotic Analysis

• Data Structures (e.g., Lists, Stacks, Queues, RB Trees, Heaps)

• Graph Algorithms (DFS, BFS, Testing Bipartiteness, Topological Sort)
In Semester 2, we will see

- Greedy Algorithms (including Greedy Algorithms on Graphs)
- Dynamic Programming (including applications in Context-Free Grammars)
- Limitations of efficient algorithms (NP-completeness)
- Approximation Algorithms (a little bit)
- Limitations of all algorithms (undecidability)
Lectures

- Tuesdays (Weeks 1-10) at 10:00-10:50, in F21 7 George Square
- Fridays (Weeks 1-5) at 13:10-14:00, in Theatre A, 40 George Square
Besides Lectures

- Tutorials on Weeks 3, 4, 6, 8 and 10.
- Labs on Weeks 2, 4, 6, 7 and 8.
Besides Lectures

• Tutorials on Weeks 3, 4, 6, 8 and 10.

• Labs on Weeks 2, 4, 6, 7 and 8.
Assessment in S2

- 3 more Quizzes
- 1 more Coursework Assignment
  - The 1st assignment was mainly coding, the 2nd assignment will be mostly theory.
- The Exam in the end.