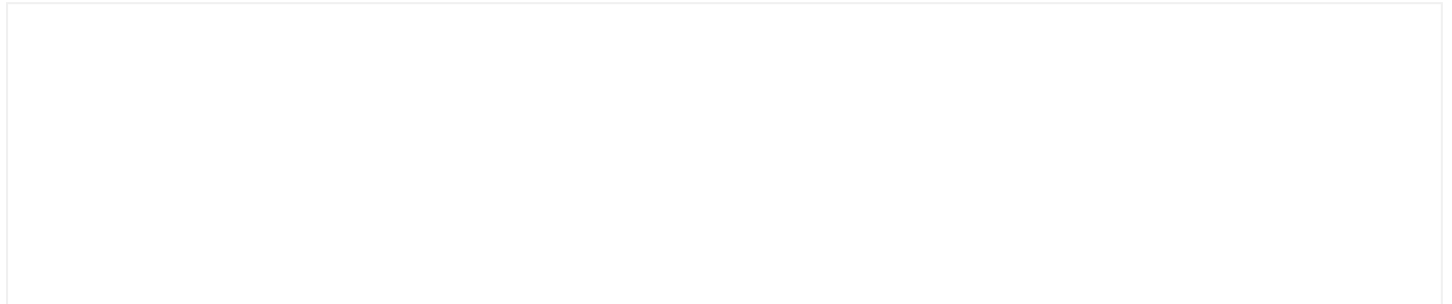


Certificate

The Instituto Superior Técnico of the Universidade de Lisboa certifies that the student ist199259 **JOSÉ JOÃO ALVES DOS SANTOS FERREIRA**, holder of the Portuguese Citizen Card No 14890517 and of PORTUGUESE nationality, obtained the title of **Licenciado em Engenharia Informática e de Computadores** (Computer Science and Engineering), on 13 July 2023, with the final grade of 16 (sixteen) points, in the scale of 0 - 20, having obtained a total of 180 ECTS, and having successfully completed the curricular units in the appendix.

The Certificate of Registration No 35215/IST/L/2025 was requested.



Electronically signed document

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Curricular Unit	ECTS Credits	Grade
Linear Algebra	6.0	14 (fourteen)
Differential and Integral Calculus I	6.0	12 (twelve)
Differential and Integral Calculus II	7.5	14 (fourteen)
Foundations of Programming	7.5	15 (fifteen)
Introduction to Computer Architecture	7.5	15 (fifteen)
Introduction to Information Systems and Computer Engineering	3.0	19 (nineteen)
Introduction to Algorithms and Data Structures	7.5	17 (seventeen)
Logic for Programming	7.5	19 (nineteen)
Discrete Mathematics	7.5	14 (fourteen)
Analysis and Synthesis of Algorithms	6.0	17 (seventeen)
Databases	6.0	16 (sixteen)
Differential and Integral Calculus III	6.0	11 (eleven)
Physics I	6.0	17 (seventeen)
Physics II	6.0	17 (seventeen)
Management	3.0	17 (seventeen)
Artificial Intelligence	6.0	18 (eighteen)
Human-Computer Interaction	6.0	19 (nineteen)
Probability and Statistics	6.0	14 (fourteen)
Object-Oriented Programming	6.0	18 (eighteen)
Operating Systems	6.0	15 (fifteen)
Theory of Computation	6.0	17 (seventeen)
Systems Analysis and Modeling	6.0	16 (sixteen)
Machine Learning	6.0	19 (nineteen)
Compilers	6.0	18 (eighteen)
Computer Graphics	6.0	16 (sixteen)
Software Engineering	6.0	15 (fifteen)

Curricular Unit	ECTS Credits	Grade
The Economics of Blockchain	3.0	17 (seventeen)
Computer Organization	6.0	14 (fourteen)
Computer Networks	6.0	17 (seventeen)
Distributed Systems	6.0	19 (nineteen)