COURSE DETAIL

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Country
Germany

Host Institution
Technical University Berlin

Program(s)
Technical University Berlin

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Computer Science

UCEAP Course Number
121

UCEAP Course Suffix
D

UCEAP Official Title
INTRODUCTION TO ARTIFICIAL INTELLIGENCE

UCEAP Transcript Title
INTRO TO AI

UCEAP Quarter Units
5.50

UCEAP Semester Units

3.70

Course Description

In this course, students gain an integrative understanding of the field of Artificial Intelligence (AI), with equal emphasis on data-driven AI (especially machine learning) and model-based AI (especially planning and reasoning). They come to understand AI from the perspectives of decision theory, machine learning, optimization, and classical problem solving. Students learn to independently implement and understand core algorithms from these areas and can identify appropriate problem formulations and AI algorithms for a given application. Course topics include problem formulations and algorithmic approaches from decision theory (including reinforcement learning, multi-armed bandits, control theory), machine learning, optimization, and inference, classical planning, and problem solving. The class also discusses fundamental and recurring algorithmic principles such as dynamic programming, optimization-based vs. sampling-based methods, and decision trees.

Language(s) of Instruction
German

Host Institution Course Number
41048

Host Institution Course Title
EINFÜHRUNG IN DIE KÜNSTLICHE INTELLIGENZ

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Institut für Technische Informatik und Mikroelektronik

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