

COURSE DETAIL

ONLINE AND REINFORCEMENT LEARNING

Country

Denmark

Host Institution

University of Copenhagen

Program(s)

University of Copenhagen

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

107

UCEAP Course Suffix**UCEAP Official Title**

ONLINE AND REINFORCEMENT LEARNING

UCEAP Transcript Title

REINFORCEMENT LEARN

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course covers online and reinforcement learning, concepts that break out of the static realm and move into the perpetual cycle of receiving new information, analyzing it, and executing actions based on the updated estimation of reality. This course considers the agents (computer programs, robots, living beings) that learn based on interactions with real or simulated environments: repeated investment in the stock market, spam filtering, online advertising, online routing, medical treatments, games, and robotics. The course also situates online and reinforcement learning to model a much richer range of problems, such as limited and delayed feedback; and even adversarial problems, where the environment deliberately acts against the algorithm (chess, spam filtering). Mathematical tools for developing and analyzing algorithms for these problems are also studied.

Language(s) of Instruction

English

Host Institution Course Number

NDAK21003U

Host Institution Course Title

ONLINE AND REINFORCEMENT LEARNING

Host Institution Campus

Host Institution Faculty

Faculty of Science

Host Institution Degree

Master

Host Institution Department

Department of Computer Science

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