COURSE DETAIL

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Country
Japan

Host Institution
Keio University

Program(s)
Keio University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Computer Science

UCEAP Course Number
120

UCEAP Course Suffix
B

UCEAP Official Title
INTRODUCTION TO ARTIFICIAL INTELLIGENCE

UCEAP Transcript Title
INTRO TO AI

UCEAP Quarter Units
3.00

UCEAP Semester Units

2.00

Course Description

This is an introductory course on modern Artificial Intelligence designed for Keio University. The course is composed of two parts taught in consecutive semesters: material introduced in part A forms a foundational basis for part B (this course), which develops these ideas further and introduces a selection of more recent results based on guided reading of relevant publications. The two courses taken in sequence form a coherent introduction to neural Artificial Intelligence. The first course focuses more on theory and fundamental concepts, with implementation of basic techniques in Python. The second course (this one) aims to cover more practical engineering topics using modern practices, as well as introducing some of the most influential recent advancements based on a selection of research papers. Part B of the course also introduces some topics in more depth, based on the interests of the instructor. One of those topics is Natural Language Processing (NLP) in the era of Deep Learning, as well as advanced methods in representation learning.

This course introduces students to the field of Artificial Intelligence, focusing on Deep Neural Information Processing Systems. Since this is a rapidly developing field, it focuses on the most important trends and core ideas. The course follows historical trends in AI with a focus on neural networks, seeing how the current ideas emerged out of decades of research in the field; it then discusses current neural architectures and algorithms and introduces modern perspectives. Completion of this course leads to an appreciation and understanding of neural AI systems and anticipation of future developments in research and applications of AI, and Deep Learning in particular. In addition to theory, there will be emphasis on programming skills in Python. The course will implement deep neural AI systems and train students on standard data sets.

It is recommended that students complete both courses (A and B) in sequence. However, it is possible to take this course as a standalone, after consulting the instructor during the first lecture. In such cases, students

should review the material from part A in their own time, as this course builds on previously introduced concepts.

Language(s) of Instruction
English

Host Institution Course Number
N/A

Host Institution Course Title
INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Host Institution Campus
Keio University

Host Institution Faculty

Host Institution Degree

Host Institution Department
Economics

Print