COURSE DETAIL

INTERMEDIATE DATA SCIENCE

Country
Japan

Host Institution
Waseda University

Program(s)
Waseda University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Computer Science

UCEAP Course Number
110

UCEAP Course Suffix

UCEAP Official Title
INTERMEDIATE DATA SCIENCE

UCEAP Transcript Title
INTERMED DATA SCI

UCEAP Quarter Units
6.00

UCEAP Semester Units
4.00

Course Description

This is an intermediate-level course on data science with a focus on machine learning methods and algorithms using Python. First, the course introduces the big picture of machine learning using various examples, while teaching techniques of how to do data visualization for various types of data, a very important subfield of machine learning. The course also addresses decision tree learning; learning linear separators; logistic regression; generalization and overfitting; model selection and regularization; linear regression; ensemble learning; unsupervised learning; neural network models, and principal component analysis.

The course also covers prediction and classification tasks using artificial neural networks and deep neural network models, and how to inrperet the results of accurate but black-box machine learning algorithms. A thorough treatment of deep learning is covered through an advanced course, Advanced Data Science.

Language(s) of Instruction
English

Host Institution Course Number
INFY20ZL

Host Institution Course Title
INTERMEDIATE DATA SCIENCE

Host Institution Course Details
https://www.wsl.waseda.jp/syllabus/JAA104.php?pKey=210MI328000120252
10MI3280021...

Host Institution Campus
Waseda University

Host Institution Faculty

Host Institution Degree

Host Institution Department

SILS

Course Last Reviewed

2024-2025