COURSE DETAIL

STATISTICAL MACHINE LEARNING
Country Korea, South
Host Institution Korea University
Program(s) Korea University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Statistics Computer Science
UCEAP Course Number 107
UCEAP Course Suffix
UCEAP Official Title STATISTICAL MACHINE LEARNING
UCEAP Transcript Title STAT MACHINE LEARN
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

This course establishes the foundation of a wide range of statistical learning methods. It aims to understand and utilize the fundamentals of various statistical learning models.

The course covers:

- statistical learning;
- classical linear methods for regression and classification;
- cross-validation;
- bootstrap;
- modern linear methods;
- nonlinear methods;
- tree-based methods;
- support vector machines;
- unsupervised learning;
- neural networks, and
- deep learning.

These topics are the basics of statistical learning, but the core of machine learning. By the end of this course, students will have easier access to and understanding of deep learning and artificial intelligence.

The course requires the following prerequisites:

- Python Basic – this course assumes a basic knowledge of Python
- STAT 241: Matrix Theory or Linear Algebra - provides a computational foundation for understanding statistical models.
- STAT 232: Mathematical Statistics- knowledge of probability theory and asymptotic evaluations.

Language(s) of Instruction
English

Host Institution Course Number
STAT424

Host Institution Course Title
STATISTICAL MACHINE LEARNING

Host Institution Course Details
https://infodepot.korea.ac.kr/lecture1/lecsubjectPlanView.jsp?year=2023&term=2R...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Statistics

Course Last Reviewed
2023-2024

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