COURSE DETAIL

MATHEMATICS FOR MACHINE LEARNING
Country Korea, South
Host Institution Yonsei University
Program(s) Yonsei University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 109
UCEAP Course Suffix
UCEAP Official Title MATHEMATICS FOR MACHINE LEARNING
UCEAP Transcript Title MATH/MACHN LEARNING
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course provides a mathematical background essential for understanding the theory behind various machine learning techniques. After this course, students are able to design and execute machine learning algorithms such as regression analysis, classification with support vector machine, feedforward neural network, principal component analysis, k-means clustering, etc. without relying on pre-programmed packages. Topics of this course include (1) linear algebra (basic and advanced), (2) probability and information theory, (3) analytical geometry, (4) calculus (basic and advanced), (5) optimization, (6) machine learning applications: distance-based classifiers, Naive Bayes classifier, linear & logistic regression, neural network, SVM, PCA, k-means clustering, etc.

Language(s) of Instruction
English

Host Institution Course Number
STA3141

Host Institution Course Title
MATHEMATICS FOR MACHINE LEARNING

Host Institution Course Details
https://ysweb.yonsei.ac.kr/SG/sg13_applypop2.jsp?srcform=myForm1&hakno=STA3141&...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Statistics

Course Last Reviewed
2021-2022

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