

COURSE DETAIL

STATISTICAL MACHINE LEARNING

Country

United Kingdom - England

Host Institution

University of Bristol

Program(s)

University of Bristol

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Statistics

UCEAP Course Number

148

UCEAP Course Suffix**UCEAP Official Title**

STATISTICAL MACHINE LEARNING

UCEAP Transcript Title

STAT MACHINE LEARN

UCEAP Quarter Units

8.00

UCEAP Semester Units

5.30

Course Description

Machine learning is concerned with algorithms that process relevant data and then perform some task. Often, performance of machine learning algorithms is measured statistically, and the algorithms themselves are heavily influenced by statistical ideas. For example, after observing several (x,y) pairs an algorithm may be able to predict with high accuracy the corresponding value of y for an unseen x . When the data is complex and/or high-dimensional, a number of statistical and algorithmic issues arise: a sufficiently rich class of statistical models must be used effectively and irrelevant data should be identified and then discarded. Students understand the statistical approach to analyzing data, and how it can be used to effectively perform tasks under appropriate assumptions. This enables students to formulate various real-life problems as statistical learning tasks and use common techniques to develop solutions.

Language(s) of Instruction

English

Host Institution Course Number

MATH30028

Host Institution Course Title

STATISTICAL MACHINE LEARNING

Host Institution Course Details

<https://www.bristol.ac.uk/unit-programme-catalogue/UnitDetails.jsa?ayrCode=25%2...>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mathematics

Course Last Reviewed

2025-2026

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