Course Outline

Course Title : Machine Learning and AI in Marketing
Faculty : Ian N. Weaver; Yuting Zhu
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Overview

The rapid development of machine learning (ML) and artificial intelligence (AI) is transforming the way firms understand and engage with consumers, design products, and optimize marketing strategies. This PhD-level course introduces the foundations of ML and AI, with particular emphasis on their applications in marketing research and practice.

Course Objectives

By the end of this course, you should be able to:

- understand key ML/AI methods and their underlying assumptions

- design and evaluate research that integrates ML/AI into marketing questions

Schedule and Outline

Session	Description
1	Overview of ML & AI in Marketing Research (Ian)
2	Supervised Machine Learning (Ian)
3	Application in Marketing: Targeting (Ian)
4	Causal Machine Learning (Ian)
5	Reinforcement Learning / Multi-armed Bandits (Ian)
6	Research Paper Discussions (Ian)
Recess Week	
7	In-Depth Exploration of Deep Learning (Yuting)
8	Unsupervised Learning and the Fundamentals of LLMs (Yuting)
9	Application in Marketing: Role of Theory (Yuting)
10	Research Proposal Discussion (Yuting)
11	Application in Marketing: Human-Algorithm Connection (Yuting)
12	Research Proposal Presentation (Yuting)