UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Big Data in Behavioural Psychology

2425-2-FDS01Q039-FDS01Q032M

Aims

The Data Scientist often works in a multidisciplinary environment, interacting with experts from various fields, including psychology. This lab aims to provide students with an overview of fundamental psychological concepts, theories, and methods, focusing on the use and analysis of Big Data. The lab promotes multidisciplinary interaction, equipping students to understand and utilize psychological insights effectively in data science contexts.

Contents

The lab will cover various aspects of behavioral prediction, attitudes, identity, language bias, and the prediction of psychological states and traits. Practical applications such as persuasive communication and psychological targeting will also be discussed.

Detailed program

Introduction to Big Data in Behavioral Psychology

- Overview of the course
- Review of traditional psychological methods

Psychological Measurement and Tools

- Fundamental psychometric concepts
- Challenges of construct validity with Big Data

Predicting Behaviors

- Exploration of behavior prediction theories: Theory of Reasoned Action and Theory of Planned Behavior
- Practical applications and case studies

Attitudes: Theoretical Models and Measurements

- Understanding attitudes and their measurement
- Application of reflective and impulsive models

Identity and Social Identity

- Exploration of identity concepts
- Analysis of social identity in psychology

Language Bias

- Examination of language biases in psychological research
- Strategies to detect language bias

Predicting Psychological States and Traits

- Theoretical models of personality
- Case studies examples

Persuasion and Psychological Targeting

- Persuasive communication for attitude change
- Target communicatiion to personal characteristics

Prerequisites

None.

Teaching form

In-class lectures.
Lectures will be in English and will be recorded.
Access to these recordings is reserved to students that, for some valid reasons, cannot attend in-class lectures. Students interested in accessing recorded lectures should email the instructor.

Textbook and teaching resource

Lecturer's teaching notes.
Slides and scientific articles will be made available on elearning.

Semester

Second semester.

Assessment method

• Verification of the acquisition of laboratory concepts through a written exam with open and closed questions.
• Final project based on work in small groups. Note that each group member will submit their individual final written

project and give an oral presentation based on this work (collective written projects or copy-pasting of projects among group members will not be allowed).
The written exam must earn at least a sufficient grade for the lab to be considered successfully attended. The grade will consist of the evaluation of the project.

Office hours

Individual appointments for office hours are available upon request. Students interested in scheduling an appointment should directly email the instructor.

Sustainable Development Goals