Course Project Guidelines

Machine Learning for Business

Deadline: 15/02/2026 23:59 CET

1 Introduction

This document describes the course project for *Machine Learning for Business*. The project constitutes the primary assessment component of the course and is designed to evaluate students' ability to apply machine learning methods to real-world business problems, while accounting for practical, economic, and governance constraints.

The course project represents **70% of the final course grade**.

2 Project Objectives

The objective of the project is to:

- identify and formulate a relevant business problem,
- propose and justify a machine learning–based solution,
- analyse results using appropriate quantitative and qualitative metrics,
- assess business impact, usability, and deployment considerations,
- communicate findings clearly to a business-oriented audience.

Any project idea that fits within this scope is acceptable. Creativity is encouraged, as long as the business motivation and methodological choices are well justified.

3 Project Format and Submission

The project submission consists of **two mandatory components**:

3.1 Written Report (PDF)

Students must submit a written report in PDF format. The report must be self-contained and address all assessment criteria listed in Section 7. At a minimum, the report should include:

- business context and problem formulation,
- description and justification of the data used,

- modelling approach and methodological choices,
- experimental results and evaluation,
- tables, figures, and visualisations where appropriate,
- discussion of limitations, business implications, and deployment considerations.

3.2 Code and Data

Students must also submit the code and data used in the project, either as:

- a ZIP archive, or
- a Jupyter notebook (or collection of notebooks).

The submission should allow the instructor to understand, inspect, and reproduce the results presented in the report. Code quality, structure, and clarity are explicitly assessed.

4 Individual and Group Projects

Projects may be completed:

- individually, or
- in groups of up to **two students**.

All members of a group will receive the **same grade**. Group projects are expected to demonstrate greater scope, depth, or ambition than individual projects. Grading will be weighted accordingly to reflect the higher expected workload for group submissions.

5 Deadline and Presentation

- **Submission deadline: Sunday, 15 February at 23:59 CET**.
- **Project presentations: 16 or 17 February (to be confirmed)**.

Each project must be presented orally during the scheduled presentation sessions. Respect of the allocated presentation time is strictly enforced and contributes to the final grade.

6 Project Scope and Instructor Guidance

The project must focus on a **business application**. Students are expected to clearly connect technical modelling decisions to business objectives and constraints. Students are strongly encouraged to discuss their project ideas with the instructor during the development phase, particularly if:

- the scope of the project is unclear,
- the relevance of the data is uncertain,
- there are questions regarding how grading criteria apply to a specific project.

7 Grading Criteria

The project is graded out of 100 points according to the following criteria.

Business Thinking (28 points)

- Business problem identification and formulation (10 points)
- Relevance of the chosen data (7 points)
- Analysis of potential impact and return on investment (ROI) (6 points)
- Understanding of business and operational constraints (5 points)

Code Quality (20 points)

- Code clarity, structure, and organisation
- Reproducibility and correctness

Model Quality (25 points)

- Appropriateness of model choice
- Sound evaluation methodology
- Quality and interpretation of results

Business Usefulness of the Model (17 points)

- Effective response to the stated business problem (7 points)
- Actionability of predictions or outputs (6 points)
- Consideration of deployment and real-world use (4 points)

Presentation and Communication (10 points)

- Respect of imposed timing (5 points):
  - Strict respect: 5 points
  - Overrun up to +25%: 3 points
  - Overrun +25% to +50%: 1 point
  - Overrun +50% to +100%: 0 points
  - Overrun greater than twice the allocated time: –1 point (penalty)
- Clarity and structure of the presentation (3 points)
- Ability to answer questions (2 points)

8 Final Remarks

The course project is an opportunity to demonstrate not only technical proficiency, but also sound business judgment and professional communication. Students are encouraged to think critically about how machine learning models are used in practice and to articulate both their value and their limitations.