

Configuration Manual

MSc Research Project
Programme Name: MSc FinTech

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School of Computing
National College of Ireland

Supervisor: Dr. Brian Byrne

National College of Ireland
MSc Project Submission Sheet
School of Computing



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Programme: MSC FinTech **Year:** 2025

Module: Practicum

Supervisor: Dr. Brian Byrne

Submission Due Date: 15th September 2025

Project Title: Leveraging Alternative Data and Machine Learning for Inclusive Credit Scoring

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Signature: Rose Edith Wairimu Mureithi

Date: 15th September 2025

PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST

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Inclusive Credit Scoring Framework

Rose Edith Mureithi
Student ID: X23269049

1. Introduction

The guide shows how to get set up and operate the Inclusive Credit Scoring Project to build more inclusive crediting scoring models through machine learning.

You need:

- Computer with 8GB+ RAM (16GB recommended)
- 10GB free storage
- Internet connection
- About 30 minutes for setup

2. System Requirements

Supported Operation systems:

- Windows 10/11,
- macOS 10.14+, Linux (Ubuntu/CentOs)

3. Setup Steps

1. Install Anaconda: <https://www.anaconda.com/download> Install with best settings.
2. Create Environment:
`conda create -name my_project_env python=3.9 -y` Campare activated
`my_project`
3. Navigate to Project Folder:
`cd "C:\Path\To\credit-scoring-project"`
4. Install Dependencies:
`pip -r requirements.txt`
5. Prepare Data:
Put Place accepted 2007 to 2018Q4.csv in folder with
`Combined_creditscoring.ipynb`
6. Launch Jupyter Notebook:
Open Anaconda Navigator → Select `my_project_env` → Launch Jupyter Notebook.
Now Open `Combined_creditscoring.ipynb`.
7. Run Analysis:
In the notebook, go to Cell → Run All.
Wait 10–30 mins for results.

4. Project Workflow

- Data Loading & Cleaning
- Exploratory Analysis (charts, summaries)
- Training of the Model (LogisticRegression, Random Forest, XGBoost, Neural Network, LightGBM)
- Evaluation & Comparison
- Results Interpretation (key predictors of loan defaults)

5. Troubleshooting (Quick Fixes)

- Command not found: Restart after installing Anaconda.
- Permission denied:
Windows: Run the Anaconda as Administrator.
- File not found make sure that CSV is present in the same folder containing the notebook and the name of CSV is identical.
- Notebook fails to open: Select proper environment on Anaconda Navigator or open jupyter notebook.
- Out of memory: Downsize the data set (nrows=100000).
- Slow response: Reduce the use of a larger dataset, close other apps or fast computer.

6. Summary

- Once setup is complete, you can:
- Perform the analysis of credit scoring
- View visual outputs and performance metrics.
- See performance statistics and visual results.
- Find out how alternative data enhances credit inclusion.