ML Project Information

ICON_Assessment.png Machine Learning Project

In this unit, Machine Learning (ML) project is one of the main assessments (weighting: 50%). It is about the design and implementation of machine learning algorithms to solve a **practical problem**. Python programming at an intermediate level is the assumed knowledge to carry out this project. This is a group project, however, students will be assessed based on individual contribution and performance. The project presentation and oral questions will be performed live. Questions will be regarding the project as well as the unit content of the lectures. All group members are required to participate and contribute to the presentation, and should be able to answer questions related to the project and detail their own contributions.

In this project, you will use deep learning model to design an end-to-end system for a cross-domain plant species identification task. You will have to consider the following scenario:

- **Long-tail distribution:** The dataset may have an imbalanced class distribution, with many rare species.

- **Cross-domain adaptation**: You are required to learn the correspondence between herbarium sheet images and field photographs, which represent different visual domains.

Details: **ML project (https://swinburnesarawak.instructure.com/courses/1900/files/1598566?wrap=1)** ⬇ **(https://swinburnesarawak.instructure.com/courses/1900/files/1598566/download?download_frd=1)**

Due Date: **11:59 pm, 28/11/2025 (Friday of Week 12)**

Weighting: 50%

Group member allocation: **here ⬀ (https://docs.google.com/spreadsheets/d/1nB_IGUiXW9P5xz9d0yGLbSCyyF_230_BZ1kHnkDMcxA/edit?usp=sharing)**

Submission link: **here (https://swinburnesarawak.instructure.com/courses/1900/assignments/27431)**

Report

Project report

- MUST include the source code link maintained on Git-based VCS (Github/Bitbucket/GitLab/…).
  - You must provide a detailed ReadMe file on how to install the software and run your GUI.
  - You must provide read-only access to the tutor/lecturer.
  - Max 8 pages
- The checklist, cover sheet, and 'Who did what' declaration form, you can download them **here (https://swinburnesarawak.instructure.com/courses/1900/files/1206727?wrap=1)** .

Project presentation and demo

A **Q&A session** will be conducted **online in Week 13**. The exact date and time will be announced shortly.

Each group must attend the session to respond to panel and industry client questions.