# Group Project Specification

## Introduction

This project is an important ingredient of this course. In this project you will learn by ...

- **teaching** an influential machine learning research paper and receive feedback from your peers
- **being taught** an influential machine learning research results by your peers and provide feedback to your peers
- **running machine learning models** through downloading, compiling and changing existing open source code (optional).

After successful completion of the project and attending all the presentations, you will be able to …

- **Understand** the major progress that has been made in the field. Students expect to learn from your presentation. They would like to understand the significance of the presented research and learn the methodology of the paper on a high level.
    - Important: Do not go into too much detail. It is sufficient to explain the big picture idea with animations and visualizations. Don't use complex mathematical formulas and expect students to be able to follow.
      Machine Learning is a big field with a lot of different methodologies that are suitable for different kinds of problems. Make sure everyone can follow your presentation and understand what the paper is doing and how it is achieving it.
      Please also reflect on your learning experience. Was it easy to read the paper? Which part of the paper did you not understand? It is OK to admit that you didn't fully understand the paper. Explain to us which part was difficult to understand.

- **Collaborate** with your peers:
  By collaborating with other students you will develop your communication and presentation skills. It is important to learn to collaborate with people from different mindsets, and to experience that everybody benefits from bringing in their different competencies and diverse intellectual backgrounds.
  It is also important to collaborate with other groups that work on a related topic. Talk to them! Important: Do not repeat already presented ideas.

- **Present** to your peers and answer questions. Being able to deliver an effective presentation is a useful skill no matter what or where you will go. A good presenter will have to get a lot of things right, including visuals, gestures, voice (volume, pace and pitch), language, posture, timing, humour, etc. In this project, you will have a chance to deliver a short presentation.

- Manipulate and execute state-of-the-art open source **code**. You should make use of the HKU CS GPU farm if necessary. To use the CS GPU farm for your experiments please contact support@cs.hku.hk to get access (mention that you are a student in COMP7404). If you run out of GPU hours, please ask for more by emailing support@cs.hku.hk. We have extensive resources available for you, however it is your responsibility to request for such resources. If you need more GPU hours, please contact support@cs.hku.hk. You have our full support for this project and there is a good chance that you will get more.

**Paper Selection**

Select a paper published in NeurIPS 2022 (https://papers.nips.cc/paper/2022). You can enter your selection in this file before the deadline. Note that the link requires a login to office 365 via HKU portal. Make sure to enter both the paper title link of your selected paper. You should only select a paper that has not been selected by any other group. This file will accessible by everyone starting from our lecture on 6 Oct. Please be careful when entering data and do modify any data from other groups.

**Deliverables**

The main output of this project will be a 10 minutes face-to-face presentation. The 10 minutes includes time for the demo but excludes 3 minutes Q&A. We may record the presentation and upload the video. Your presentation should be a gentle introduction to the field of research that your selected paper covers. Focus on why the paper is so influential and what was the impact specifically. Did the paper influence other famous papers? It is important to focus on the most important aspects and you may also introduce related work from other papers. You don't need to go too deep into the details. Focus on the basics and put yourself in the position of the audience. What would you want to learn about this paper? We recommend that you include a demo with code and instructions on how to run it, if possible. One (and only one) of your group members will have to submit to Moodle the following items before 9 Nov 23:55. No late submissions will be accepted.

1. PowerPoint presentation file in *.PPTX format. You must use the original submitted file. You are not allowed to make changes to the submitted file.
2. Demo code (optional) with detailed instructions on how to use it. If you use data that is not publicly available you should also upload those. We encourage you to present a demo showing the results of the paper and submit the demo code so that your audience can run and experiment with it. It would be excellent if you could test the method with data that was not tested by the authors of the paper.

**Peer review**

You are required to submit a detailed peer review for a number of assigned presentations. This is compulsory and a missing peer review will result in an F for your project.

**Attendance**

You must attend all presentations. We will take attendance. We will select students at the end of every presentation for asking questions. If you are selected and do not respond you will get an F for your project.

**Plagiarism**

Anything that you use in your presentation and that is not yours should be properly acknowledged. For example, if you copy a sentence you should put it in quotation marks and provide a reference. If you copy a picture you should add "Extracted from …". It is your responsibility to understand what exactly plagiarism is. Claiming that you do not know what exactly constitutes plagiarism will not protect you. We will use the strongest consequences available to us if we detect plagiarism. Note that almost everything you present will not be your work so just make sure to properly attribute everything and you are fine.

**Time management**

Overrunning will have a negative impact on your grade, i.e., it will not be possible to get an A or B with bad time management. Do not overrun the assigned time slot for the presentation or Q&A. We will use this: https://time.is/ to display the current time. Time slots will be published later.

**Grade Descriptors** for presentations can be found here (for reference only).