Project Progress Report Handout (20 points)

Introduction

The project progress is a **check-in to show that you are on track** to complete your project. By the project progress date, your team should have:

- Obtained all or most of the data
- Come up with a reasonable baseline model
- Produced at least one qualitative and quantitative result
- Provide a convincing argument for the feasibility of completing the project within the time available

How to submit

Submit your project progress report as a group on Quercus by the Progress Report deadline. Any work that is submitted up to 24 hours past the deadline will receive a 20% grade deduction. No other late work (i.e. more than 24 hours past the deadline) will be accepted. Quercus submission time will be used, not your local computer time or any other screenshots that you provide. You can submit your work as many times as you want before the deadline.

This document should be written using Latex based on the course template. There is a 3-page limit (ICLR conference standard) for the main text and unlimited pages for references. It should make use of tables, model diagrams and figures to make the report concise and easy to read. The text should be kept to a minimum and are specified for each of the three sections that are to be submitted. If any submission exceeds to 4 pages, a 20% penalty will be applied. We do not accept any submission longer than 4 pages (100% penalty would be applied).

Progress Report Rubric

The project progress document is graded out of 20 points.

- **Brief Project Description (5 points)**: In your own words provide a brief description of the motivations behind your project, the goal of your project, why it is interesting or important, and why deep learning is a reasonable approach.
  - Someone unfamiliar with the project should be able to quickly establish the project goals, why the project is interesting and/or useful, and why machine learning is an appropriate tool for the task.
  - Provide supporting images and diagrams to minimize the required reading.
  - Visual elements are professional, concise and easy to read.
  - Make sure you show what is the input and what is the output of your model and justify why deep learning is a good approach to generate such outputs from your inputs.

- **Notable Contribution (15 points)** : Provide a detailed summary with results (figures and diagrams) of the following:

  - **Data Processing**: You can describe the data that you have collected and cleaned. Be clear and specific when describing what you have done, to the point that someone could reproduce your work. If possible, show some statistics about your cleaned data (e.g., number of examples in each class), and at least one example of a cleaned training

sample. You should also mention how you plan to obtain new data for final testing of the model. We prefer you collect some **new data** yourself or if that is not possible, use an entirely different dataset which was not used anywhere before.

- Clearly describes sources of data, and the steps you took to clean and format your data. Statistics and data examples are well chosen and show that you have completed data processing. Data cleaning descriptions are clear enough to be reproduced by a classmate.
- Visual elements are professional, concise and easy to read.
- Provides a plan for testing on never before seen data.
- Describe any challenges you may have faced with the task.

– **Baseline Model**: You can provide a diagram to describe the baseline model that you have tested and how it was/will be compared with your primary neural network model. The baseline model can be a simple machine learning model (e.g., SVM, Random Forests, Models from labs and tutorials, etc.), a hand-coded heuristic model (that does not use machine learning), or something else. **A model that performs randomly is not acceptable**. The expectations for the baseline model will vary from project to project. You should also provide at least one quantitative and qualitative result. These results could be learning curves, or results showing the performance of the model on selected samples of data. The focus here is on assessing the feasibility of your model to achieve the project objectives.

- A reasonable choice of baseline for the problem being solved.
- The baseline model is easy to implement and requires minimal tuning.
- Visual elements are professional, concise and easy to read.
- The best results achieved with your model in terms of quantitative (i.e., accuracy, error, loss) and qualitative (i.e., identify something interesting about how your model performs on select samples or class of samples).
- Describe any challenges you may have faced with the task.

– **Primary Model**: You can provide a diagram to describe the best model architecture that you have so far. This description should be more detailed than in your initial proposal. You should provide a rough idea of how complex your model is (e.g., number of layers, number of parameters, etc.), and all the details necessary so that someone can reproduce a model like yours that will perform similarly. You should also provide at least one quantitative and qualitative result. These results could be learning curves, or results showing the performance of the model on selected samples of data. The focus here is on assessing the feasibility of your model to achieve the project objectives.

- The choice of architecture makes sense for the problem.
- The architecture implementation is based on neural networks.
- Visual elements are professional, concise and easy to read.
- The best results achieved with your model in terms of quantitative (i.e., accuracy, error, loss) and qualitative (i.e., identify something interesting about how your model performs on select samples or class of samples).
- Describe any challenges you may have faced with the task.