Final Project (Group Project): Deadline Saturday 4/29/2019 11:59pm

Application project. Pick an application that interests you, and explore how to apply neural networks to solve it.

Project Parts: Presentation & Final Report

1. Please make one submission for your entire project group (the presentation & final Report) and write your team members
2. Please explicitly state the work which was done by team members your project and final report.

Example of diverse applications

- Your Senior Project
- Detecting diseases
- Chatbots
- Image Classifiers
- Object Detection
- Autonomous Driving
- Sentiment Analysis in Text
- Sentiment Analysis in Speech
- Price Predictions
- Video Classifiers
- Action Recognition

Presentations Guidelines

1. Title: Your project title
2. Team Name: Include your names
3. Predicting: Briefly explain the motivation for your topic, what you built, and the results. It's easier to think of this as a quick summary of the inputs and outputs.
4. Data: Exactly where did your data come from and what does your contain? (ie. What are in the rows and columns? Are examples labeled with ground truth? If you have images, are they color, normalized, etc?
5. Models: Exactly which model(s) are you using?
6. Results: Make a compact table of results.
7. Discussion: This is where you share your thoughts about your project. (Hopefully you have a few interesting interpretations!) Briefly summarized what just happened. Briefly explain whether or not you expected your results. If your results were good, explain why. If they were not good, explain why
8. Future: If you had another 6 months to work on this, what would you do first?

Final Report Guidelines

1. Abstract [≈0.5paragraph] consists of 1 paragraph consisting of the motivation for your project and a high-level explanation of the methodologyyou used/results obtained
2. Introduction [≈0.5pages] explains the problem and why it is important. Discuss your motivation for pursuing this problem. Give some background if necessary. Clearly state what the input and outputis. Be very explicit: “The input to our algorithm is an {image, amplitude, patient age,rainfall measurements, grayscale video, etc.}. We then use a neural network to output a predicted {age, stock price, cancer type, music genre, etc.}.”This is very important since different teams have different inputs/outputs spanning different application domains. If you are using your project for senior projects or other classes, add a paragraph explaining which components of the project were used for each class.
3. Dataset and Features [≈0.5–1pages] Is there any preprocessing you did? What about normalization ? What is there solution of your images? How is your time-series data discretized? Include a citation on where you obtained your dataset from. make sure to talk about it. Try to include examples of your data in the report.
4. Experiments/Results/Discussion [≈1pages]
5. Conclusion/Future Work [≈1–2 paragraphs]