Final Project

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Couse webpage: https://uclanlp.github.io/CS269-17/

Requirement

- #students: ≤ 4, group project
- rubric
  - 5% Proposal
  - 25% Final report
  - 10% presentation

Final Report

- Can be in PDF format, a jupyter notebook, or a webpage.
- Less than 4 pages.

Project types

- List of potential ideas:
  https://goo.gl/W9RuoZ

- Shared task
- Research project
- NLP/ML applications
- Literature survey / Reimplementing
- Building a library / Demo

General Steps

1. Define your task
2. How to evaluate?
   - Where to get data/ how to split data (use pre-split data is possible) / Define your evaluation metric
3. Understand your problem
   - Implement simple baseline and/or existing approaches
   - Error analysis (e.g., https://arxiv.org/pdf/1606.02858v2.pdf)

General Steps

4. Implement a non-trivial approach
   - Sanity check / Unit testing / Parameter tuning
5. Analysis
   - Error analysis / Discussion/ Ablation study / Visualization
6. Improve your approach

Useful tools

- https://uclanlp.github.io/CS269-17/resource

- Machine learning toolbox:
  - Scikit learn,
  - Pytorch, DyNet, Tensorflow
- NLP toolbox:
  - NLTK, SpyCy

Paper summary

- Individual project
- Pick a paper from ACL, EMNLP, NIPS, ICML, UAI, AAAI, …
- Example: https://www.salesforce.com/products/einstein/ai-research/tl-dr-reinforced-model-abstractive-summarization/
- https://research.googleblog.com/2017/08/transformer-novel-neural-network.html
- https://github.com/uclanlp/reducingbias/blob/master/src/fairCRF_gender_ratio.ipynb