Computer Vision

MileStones of Course Project [Prepared by Ahmed Beltagy]

Overview of tasks

- Read some papers and summarize two of them.
- Find some implementation and run it.
- Convert the code from Tensorflow to PyTorch or vice versa.

Milestone total of 4 weeks. [Use your time wisely]

1st Milestone (1 week)

1. Understand the problem very well.
2. Explore the KITTI DATASET and know how it is formatted.
3. Read some papers and summarize **at least 2 papers ! [The more the better to understand the problem aspects]**

Papers should be from the list of participants on KITTI or published in CVPR, ICCV, ECCV or ICRA

Paperswithcode.com is a code resource for papers that have their implementation details.

WARNING : KITTI DATASET when unzipped will be about 80GB !!

2nd Milestone (1 week)

1. Choose a paper to implement and follow their guidelines to implement the paper network architecture (run the paper code)
2. Train the network
3. evaluate results on KITTI dataset
4. Visualize the results

3rd Milestone (2 weeks)

1. Convert the code you chose to (Pytorch/TensorFlow) -- WARNING: This is the hardest task. Do Not Underestimate it.
2. Train the network
3. Evaluate the results
4. Visualize the results
5. Prepare Presentation and Group report along with paper summaries which was delivered in first Milestone.

Useful feedback from Amr Ramadan

1. For the CV course's final project, here is my proposed timeline.
2. One week for each team member to read and summarize a paper (two papers were very scarce).
3. Then week two and part of the third week, each team is required to **Implement** (this is to ensure their understanding), not run from the terminal the original code of the paper, and then visualize it.
4. The rest of the third and fourth week is to convert the code (keeping in mind that they will most probably ask for a week extension).
5. I hope you find this useful and additional minor detail, is to share with them Stanford's paper on how to read a paper here: https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf.