WEEKLY PLANS:

Week 3

1/22

1. Label 100 data points

2.

1/21

1. Label 200 data points

2. Read a Paper about Small Sample Size to Train Models

1/20

1. Label 100 data points

2. Find a Solution to Small Sample Size to Train Models

3. Reform The Combinations of Models

1/19

1. Label 100 data points

1/18

1. Label 100 data points

1/17

1. Label 100 data points

Week 2

1/16

1. Label 100 data points

1/15

1. Label 100 data points

1/14

1. Label 100 data points

1/13

1. Label 100 data points

2. Fix the Pipeline of BoVW-SVM

1/12

1. Label 100 data points

2. Fix the Pipeline of HOG-Random Forest

1/11

1. Label 100 data points

2. Fix the Pipeline of HOG-LogisticRegression

3. Research on Feature Matching

4. Read one paper in Feature Matching or Place Recognition

1/10

1. Label 100 data point

1/11

1. Label 100 data point

2. Naive Bayes - Logistic Regression - Ada Boost - PatchNetVLAD

1/12

1. Meet w/ Nick

2.

Week 1

1/3

1. Label 100 data points

1/4

1. Label 100 data points

1/5

1. Label 100 data points

2. Get the pipelines repaired, for at least three models

3. Start on the software engineering of the module, by applying things in CSC260

4. Send Aaron questions and weekly progress; still send reports every Tuesday

since Wednesday could be fluid in schedules and homework

1/6

1. Meet w/ Aaron

2. Label 100 data points

3. Report precision and recall along with confusion matrix

1/7

1. Label 100 data points

2. Update and reply Aaron

1/8

1. Final Update

2. Label 100 data points

1/9

1. Prep for the meeting on Tuesday and Thursday

2. Label 200 data points w/ Google GeoDB

3.

Winter Week 5

12/27

1. Label 100 data points

12/28

1. Label 100 data points

2. Change the code a bit

12/29

1. Summarize 12/15-12/28

2. Label 100 data points

12/30

1. Label 100 data points

2. Write a bit on the report

12/31/21

1. Label 100 data points

1/1/22

1. Label 100 data points

1/2

1. Label 100 data points

2. Organize all the updates and plan for CSC-499

Winter Week 4

12/20

1. Label 100 or 200 data points

2. Recollect all the points mentioned by the professionals and peers

3. Draw in SimpleMinds the current diagram of this notebook

12/21

1. Label 100 data points

2. Get BoVW to work

3. Get CIFAR10(0)-CNN to work

4. Compare the performance between the three run models

12/22

1. Reply Nick

2. Label 100 data points

12/23

1. Label 100 data points

2. Update both Nick and Aaron

12/24

1. Label 200 data points

2. Recollect all the Weekly Notes

12/25

1. Label 100 data points

12/26

1. Label 200 data points

2. Upload more photos

Winter Week 3

12/13

1. Extract frames from videos

2. Label 100 data points

12/14

1. Label 100 data points

2. Transfer the logistics of images into a module

12/15

1. Label 100 data points

2. Try out the code in logistics

12/16

1. Label 100 data points

2. Update the summary of papers in the research notebook

12/17

1. Label 100 data points

2. Unit test the software modules and draw the diagram of design patterns

12/18

1. Label 100 data points

2. tackle the difficulty in feature extraction and supervised learning

12/19

1. Label 300 data points

2. Write code to logically extract frames from videos

Winter Week 1

11/29

1. change labelling to be local

2. make reusability happen on pickles

11/30

1. update the BoW model

12/1

1. send the weekly progress:

- I.

- data collection: collected around 100-200 instances but randomly

- preprocessing: modified the OOP structures

- model training and testing: projected a better linear classifier with more instances

- data visualization: understood further with the help of the confusion matrix

- II.

- data collection: schedule visits over the campus, based on the map

- pre-processing: read the paper on Bag of Words by Fei-fei Li et al.

- model: make a pipeline towards CNN

- data visualization: plot things besides the confusion matrix for evaluation

- III.

- the uncertainty in intern application and grad application

- unexpected events happening in life

2. Routes

- HOG-SVM --> HOG-CNN

- HOG-SVM --> BoW-SVM

12/2

1. BoW model

2. weekly summary

12/3

1. deliverables in 497's sheet

2. check the grades and keep going, list winter plans and share with Aaron

12/4

1. plot the distribution of photos, to see the most popular module

2.

12/5

1. get the building selector work

2.

Final Week

11/22 Monday

11/23 Tuesday

11/24 Wednesday

1. Run the code to produce a reasonable output

2. Finish the report

11/25 Thursday

1. Design winter break plan

2. label more data

3. find a different method of modeling, like CNN and k-NN

\*4. is the Misc folder anyhow useful for the project

11/26 Friday

1. Start off modeling on the photos available so far

2. Think if the sheets inherited from 497 would be helpful

- if things happened to be helpful, then just copy another

one into the repository

- otherwise, it would be meaningful enough to validate the

summary

11/27 Saturday

1. Stormy day

11/28 Sunday

1. BoW v.s. HOG

2. the .pkl Pickle file

Week 10

11/15 Monday

1. 急白了头啊: add subdirectories with names of buildings

- a. the buildings that has the most instances

- b. the classes that are different enough from each other

- \*my standard right now is to focus on getting the data point supplemented

11/16 Tuesday

1. 急白了头啊

11/17 Wednesday

1. Focus on getting the data shunt to the model

2. Run the tutorial's code

3. Tell things from there

11/18 Thursday

1. Compute the distribution of the dataset

2. Cut off one label from 31 existent, to reduce the dimensions

- although this really should just be 4 classes

- Hale House

- Becker Career Center

- South College

- West College

11/19 Friday

1. Run the tutorial

- understand every line's work

- modify the pipeline as needed as possible

11/20 Saturday

1. Draft due on Sunday

2. Code acknowledgement and inheritance of work

- RealPython

- Quora

11/21 Sunday

1. Draft due today

2. Donation of Room Items

3.

Week 9

Week 8

11/1 Monday

1. Decision:

- 499 or 489

- I mean my life in thesis started in 497, .., and I am doing

- 498 right now. No way to switch, to be honest and fidel enough..

- Use Nick's Regression Model, to replace the "simple task"

that I have right now

2. Photo Logistics:

- Upload more photos

- Label more photos

- Take more photos

3. Papers w/ Code:

- Find VGG-based and VLAD-based architectures

11/2 Tuesday

1. - SGD-based Linear Regressor

- general CNN

2. - Report Aaron the tasks did tonight

- Update and Reply Registrar's email

11/3 Wednesday

1. Label More Data

- clean the space of the drive as well

- organize the notebook a bit too

2. Stay tuned in 489's Waitlisting Status

3. Complete the feature engineering on R, G, and B channel data

4. After feature engineering, work on the task with SGDClassifier

11/4 Thursday

1. Message Aaron the plans:

- train the SGDClassifier

- clean the notebook while coding

- upload more photos

2. ask Aaron about the grading rubric

3. confirm standing in 498: keep the planning but things may work

11/5 Friday

1. confirm the standing in 498

2. Nick: would not succeed unless I

- know what each step to do very clearly

- will join the next Wednesday meeting with himself and Aaron, while

meeting the baseline

- can and will do the project over the break, given rare successful cases

- keep things in the loop

3. Aaron:

- avoid mis-communications by messaging confusions

- keep him in the loop

11/6 Saturday ~ WRITE REFLECTIONS

1. train the model

2. add more data

11/7 Sunday

1. aggregate the data and fit the dimensions

2. add a non-linear model after fitting the data

Week 7

10/25 Monday

1. Set up the poster and keep coding ConvNet

2. Find if there are existent code for NetVLAD

3. Explore other architectures like CaffeNet, ResNet, etc.

10/26 Tuesday

1. Batch 5 and 6 --> Notebook

2. CNN Model: recognize CPH, as much as possible

3. Let the image flows to the model and test with some transformation

10/27 Wednesday - Pre-Poster Session

1. Weekly Meeting: Progress Update

2. Model Fitting: obtained x, to approach y

3. Model Augmentation: to modify base on the recognition results

4. Geo-tags: consider using some location analysis, instead of manual labelling,

to obtain building's name

10/28 Thursday - Poster Session

1. perform data sheet transformation

2. let the CIFAR model recognize the images

3. use KFold as cross-validator

4. make predictions and results + projections w/ advanced architectures,

if time allows

10/29 Friday - Post-Poster Session

1. label more photos

2. aggregate the advice:

- Poorna: how the project could extend to a more general context; how

the CNN works in essence; and how the project would actually

apply to the real scenarios

- Chris: what features are the focus of extraction (e.g., color, pattern,

shape, angle, illumination, etc..); will the dataset cover every

angle of every building on campus

- Matt: what might be a user case, and this is to investigate; the current

algorithm's completeness is also worrisome, so to shrink down the

project to one or two models; test out the TIME too, as in general

people work for about two hours per day

3. take more photos

10/30 Saturday - Update The Professors

1. complete the small recognition task on 216 photos

- why do we need a regularization layer

- why we would need a dropout layer

- why there can be a ReLU layer

2. run the task that recognizes the batch of photos

10/31 Sunday - Last Attempt

if works then continue, otherwise drop.

THINK ABOUT MY FUTURE.

1. continue w/ the recognition tasks

- the model for CIFAR10(0) --> the model for UnionBuildings

- email Aaron by 5pm

2. label more photos, like 1-2 batches, so that I have

10 batches ready to go

3. Papers w/ Code: VLAD architectures