AI + Healthcare Write-UP:

1Æ†Overview†€1†paragraph›

Overview:

I tained one model for all 17 sensors. I originally implemented a SVM model as a baseline to compare against the CNN, however I ran out of time and did not end up implementing a CNN model. I would expect that the CNN model would be more accurate than the SVM model.

I implemented a 67/33 training/test set split. I used my macbook air from Early 2015 1.6 gHz, with 4 GB of RAM for training.

Data:

Due to time constraints I only looked at the first 100 images from each sensor. I flattened the images in order to classify them using python’s SVM scikit learn library.

Methods:

I tried SVM as my only model. Ideally, I would have tried a CNN modedl, which is usally the best model for image classification but I did not end up implementing it.

● What was your best model? e.g. SVM or CNN

● What was your best validation set classification accuracy? e.g. 72% accuracy

● What were the specifications of your training/validation set? e.g 90/10 split

● What were the hardware specifications of the machine you used for training? e.g.

Macbook Pro 2.9 GHz quad core

2Æ†Data†€1≠2†paragraphs›

● Did you subsample the data? Did you use all the data?

● Did you resize or crop the images?

● Did you apply any data augmentation techniques?

● What was the distribution of labels/images, per sensor? What about time of day?

● Did you do any other data pre-processing?

3. Methods†€1†paragraph›

● What machine learning methods did you try? e.g. logistic regression, SVM, CNN

● What features did you use? e.g. HOG, depth maps, ocean images

● What were the settings or hyperparameters of the models you tried? e.g. learning

rate=0.1

● Why did you use certain model configurations? e.g. 2 layer neural network

4Æ†Results†¶†Discussion†€1≠2†paragraphs›

● For each model you tried, what training/validation accuracy did you get?

● What was the accuracy for each sensor?