Initial Team Meeting Report

Team Name: Salty Spitoon
Team Leader: David Schmitt
Team Members: William Barraza, Uyen Tran. Afagh Ghayour
Meeting Date/Time: Tuesday (3/4/25) 1015-1045
Attendees: All members

Project Topic / Service Scenario

The project is on human action recognition (HAR). HAR is a critical problem set in a range of areas. HAR can potentially detect abnormal, threatening, or otherwise time sensitive behavior. In business safety and security for example, HAR can be used to identify someone choking that needs assistance. The project will be limited to general images of human poses, such as sleeping, sitting, etc.

Selected Dataset

The dataset is Human Action Recognition dataset from Kaggle. It has 15 different classes and 12,000 images, pre-separated into training and testing data.

https://www.kaggle.com/datasets/meetnagadia/human-action-recognition-har-dataset

Machine Learning Algorithm(s) to be Used

The team has graduate students, so two convolutional neural networks are planned, such as efficientnet and imagenet. A support vector machine model will be the backup. The dataset includes other examples that will serve as a baseline for performance. The group is four people, so there will be enough work between two algorithms for everyone to contribute.

Additional Notes / Considerations

Key decisions taken were selecting an image classification problem, but one that did not have many GB of data. The dataset in question is 300-400 MB. This will be critical in reducing the training time of the algorithms. Other datasets were discussed but deemed too large and time consuming to preprocess and train.

Action Items now are:

1. Import the dataset and note any functional issues
2. Review Kaggle examples for good baselines
3. Review Gonzalez and Woods Digital Image Processing, and the class textbook for references on CNN