**Final Project Proposal Example**

**Project Topic**

Face classification and detection.

**Group Members**

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**Project Description**

Suppose to do a machine learning about facial detector. We can load the training dataset to train the model, and it can recognize the mood. We classified the facial expression to seven categories: 0=Angry, 1=Disgust, 2=Fear, 3=Happy, 4=Sad, 5=Surprise, 6=Neutral. Hopefully the accuracy rate will obtain to at least 90 percent.

**Possible Dataset**

The data consists of 48x48 pixel grayscale images of faces. The faces have been automatically registered so that the face is more or less centered and occupies about the same amount of space in each image.

train.csv contains two columns, "emotion" and "pixels". The "emotion" column contains a numeric code ranging from 0 to 6, inclusive, for the emotion that is present in the image. The "pixels" column contains a string surrounded in quotes for each image. The contents of this string a space-separated pixel values in row major order. test.csv contains only the "pixels" column and your task is to predict the emotion column.

<https://www.kaggle.com/c/challenges-in-representation-learning-facial-expression-recognition-challenge/data>

**Possible Strategies for the Project**

* What kind of algorithms you may evaluate in the project.
* How to train the model and tune the optimal parameters

**Schedule for the project**

We have three weeks to do this project. Exclude the final exam week, we only have almost two weeks. The first week we suppose to train all the data. And the second week, we want to use the camera for real-time facial recognition. We will do our best to improve the test accuracy to more than 90 percent.