Milestone 3 - Implementation & Algorithmic Environment

Team ID: 21

Team Members: Phuong Pham, Jing Lin, Shang-Yun (Maggie) Wu

- Implementation
    - Neural Network
        - Dense (almost fully-connected layers)
        - Experiment the effect of dropout, batch normalization when building NN model
        - Input: data point
        - Output: sigmoid activated result
    - Logistic Regression
        - L1 Norm
        - L2 Norm
    - SVM (benchmark)
        - Varying step size (adagrad, adam)
        - Implement Pegasos

- Packages / Libraries
    - Keras (Neural Network)
    - Sklearn (Logistic Regression)
    - Textblob (Semantic Analysis)
    - Seaborn (Visualization)

- Original Work
    - Implement SVM
    - Neural Network implemented via Keras
        - Develop and tune original architecture
    - Compare results between NN, Logistic Regression and SVM

- Work Split
    - Each of us will do feature engineering with different approach before implementing classification frameworks
        - Visualization
        - Statistical test
        - Logistic regression with LASSO
        - PCA
    - Each of us will implement one of the above classification frameworks and tune / discuss about the results

- Open Questions

- Whether or not text (description / keyword of kickstarter project) influences the final outcome
- Whether or not NN performs better than classical machine learning (logistic regression / SVM)
- Whether or not currency / country influences the final outcome