**Software Implementation and Testing Document**

**For**

**Sentiment Analysis on Twitter**

Version 1.0

**Authors**:

Oscar Kosar-Kosarewicz

Andre Guiraud

Jacob Wharton

# Programming Languages (5 points)

Python - we are using this language due to its flexibility. It has excellent data science libraries which we need as well as mature web development libraries, allowing us to integrate the components of the project more easily. In addition, all of our group members are experienced in Python.

# Platforms, APIs, Databases, and other technologies used (5 points)

Github for version control.

Django for web application development

AWS to acquire training data

Tweepy to gather tweets

TextBlob to parse text and write algorithms for language comprehension

Kibana (possibly) for browser-based visualization of output data

AWS (hopefully) to host the web app

# Execution-based Functional Testing (10 points)

*Describe how/if you performed functional testing for your project (i.e., tested for the* ***functional requirements*** *listed in your RD).*

# Execution-based Non-Functional Testing (10 points)

*Describe how/if you performed non-functional testing for your project (i.e., tested for the* ***non-functional requirements*** *listed in your RD).*

# Non-Execution-based Testing (10 points)

*Describe how/if you performed non-execution-based testing (such as code reviews/inspections/walkthroughs).*

Jacob: I always perform inspections of all code I write before undergoing execution-based testing. In particular, I re-read every line of code at least twice, after taking a break from writing the code in order to refresh my head. For Python in particular, which is not a statically-typed language, this helps to catch errors that would normally be easily caught by a compiler. It also allows me to catch some simple logic errors. I have a lot of experience using Python, so it is often easy for me to spot common mistakes, but surely the more difficult thing is catching logic errors, for which execution-based testing is more effective.