



Testing Lightning Talk

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Unit/Interface Testing

- Units that will be tested are different types of word embeddings
 - Our project relies heavily on different pre-processing techniques
 - POS tagging, tokenization, text cleaning, etc.
 - NLTK, Word2vec, Stanford NLP, SpaCy, etc.
 - Find one best suited for software documentation
- Python will be the main tool for testing



Integration Testing

- Modules: pre-processing data, POS tagging, tokenization, vectorization, and clustering
- Different modules depend on others to work
 - All modules are expected to be able to run together and produce the desired result
- Our team is still researching different implementations of each module
 - Integration testing is important to ensure that our system produces the correct results
- Main tool for testing: Python



Regression Testing

- Incremental testing
- Extensive testing on new components before addition
- Use Github's features to pull current system and experiment with new features without affecting the current system
- Critical features such as data collection and tokenization must be watched closely as these components are crucial for the processing to work correctly
- This will be done in line with the client's specifications



Acceptance Testing

- The design requirements and how our team is achieving following these requirements will be demonstrated on a weekly basis with our client
- Demonstrations and explanations of research and how the requirements were met will be explained in the weekly meeting
- Accept feedback from client and use it for the following week's research and requirements
- Most of the client involvement will revolve around showing progress each week and then receiving specifications for the following week



System Testing

- End to End testing from importing data to outputting accuracy of NLP model is verified
 - Each component of code is ran together
 - Importing data and libraries
 - Pre-processing data
 - POS tagging the data
 - Creating NLP models
 - Outputting results from predictive model
 - Also test code runtime and overall structure



Results

- Still in beginning stages so no testing results to report as of now
- Things to look for
 - Points of failure
 - Different modules are working together
 - Model works similarly with different data sets