

Critical Assessment

Please run app with Ipad air 2 simulation for best overall performance. Also, remember to set a location in the simulator. You will need a twitter account attached to the simulator to respond to tweets.

Achieved –

Sentiment Analysis of Twitter Data.

Visualization of Twitter data.

Game for giving the user a ‘feel’ of the sentiment analysis in their city.

Favourite Places

Weather Report

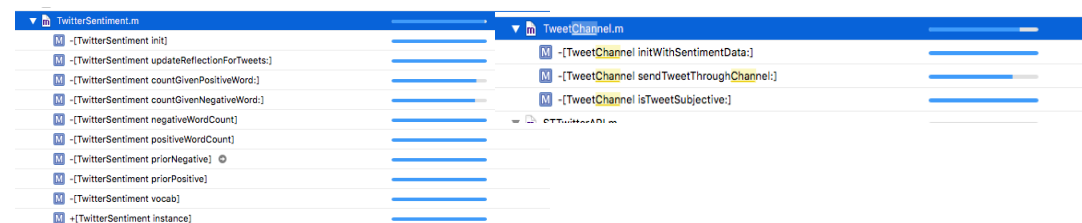
Testing -

All of our code was designed in a modular fashion. We tried to abide by the single responsibility principle, making it much easier to test each of our modules.

Sentiment Analysis

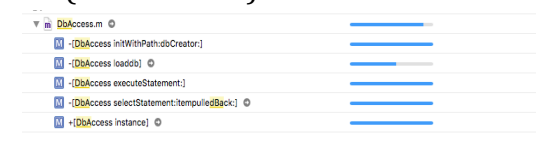
The sentiment analysis of twitter data is tested through unit tests (Found in Demo tests folder) we tested against classifying positive/negative/emotionless/subjective tweets and tested in changes the overall sentiment of the city.

We achieved strong code coverage for our sentiment analysis (around 95%)



Database

We tested all of our data-based related modules with unit tests. (game high-score, favourite places, image-links). We achieved strong code coverage for this(around 94%):



We could further improve this by having an independent database purely for testing. We're currently using the same database to test and in production code. This is why we lose code coverage when first loading the database.

The weather extraction is tested through unit tests.

The tweet extraction is tested through unit tests.

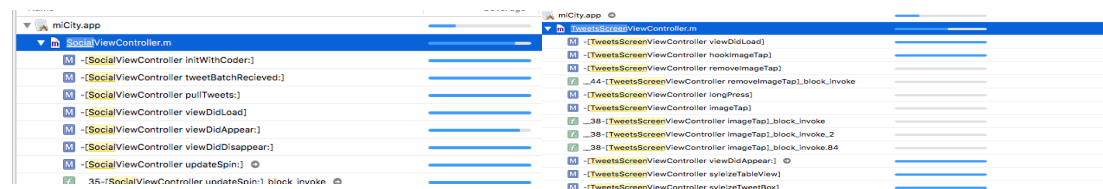
Ui Testing -

We tested our view controllers with ui testing

Social ViewController/Tweet Screen

We got around 90% coverage on our social view controller.

Our Tweet view screen only got around 55% coverage. This is because much of logic for this screen revolves around being able to respond to tweets. We would need to introduce moqing to get better coverage.

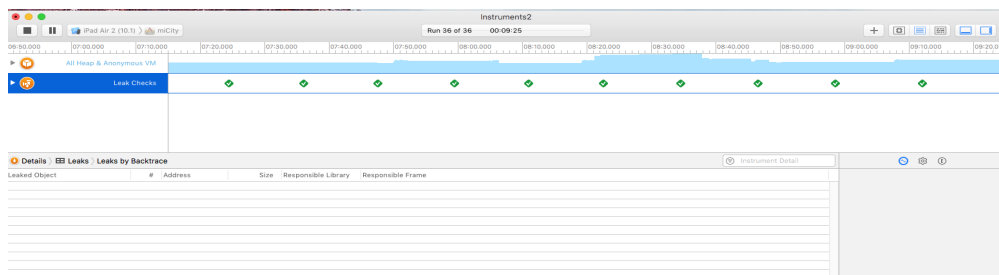


All tests can be found in the DemoTests and DemoUITests folders of our project.

Memory Management -

We used the profiler to find memory leaks. We found a memory leak in the weather extraction using this, this was due to the asynchronous task session not getting cleaned up after executing.

App after navigation between screens: (timer for ~8mins)



Limitations -

One of the main limitations of our sentiment analysis is that it is English-language dependant. Further development would expand the corpus for different languages.

The sentiment analysis of twitter data needs to be extended to use emotion analysis techniques, which would be able to deal with a more diverse range of expressions such as anger, fear, excitement etc.