twittical

QUITTER/ TWITTICAL

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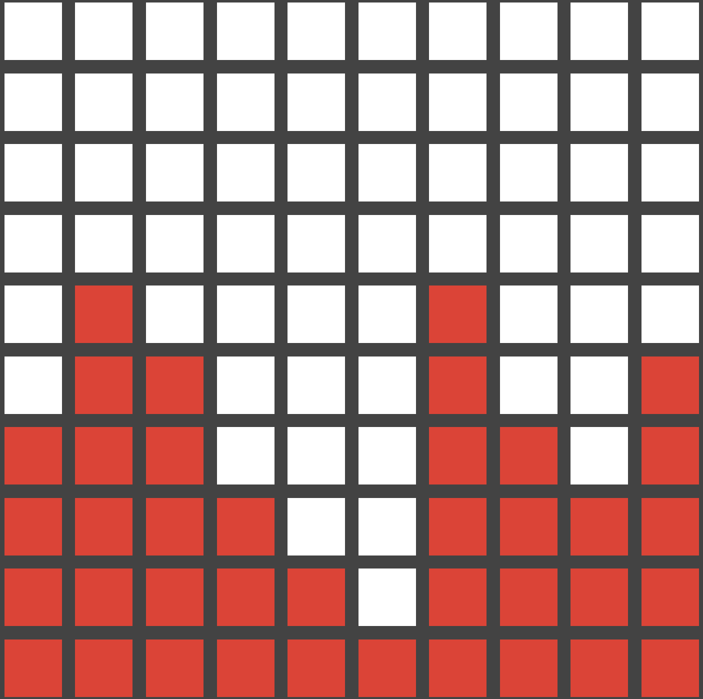
Mission statement:

Track sentiment of tweets associated with candidates

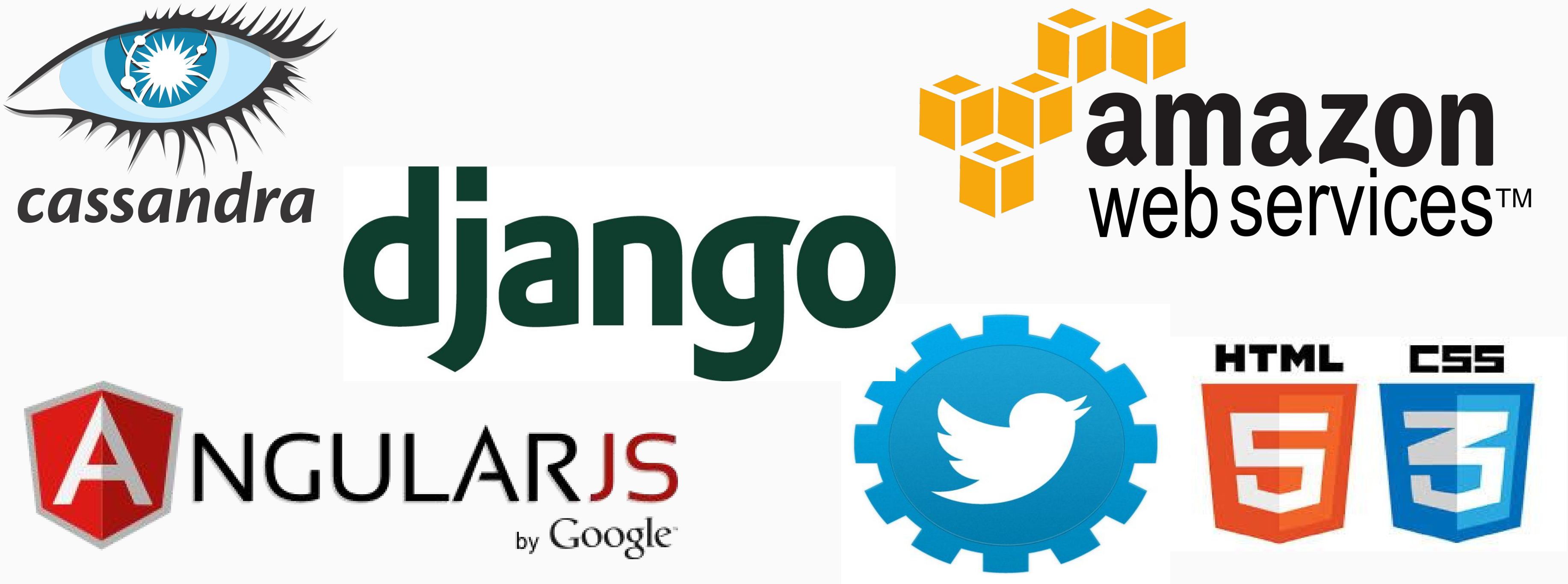
Link:

http://ec2-52-38-210-101.us-west-2.compute.amazonaws.com:61621/#/homepage

A look at the varying sentiments over the past few months pertaining to presidential candidates



Technology Stack



Architectural Pattern - MVC (AngularJS)

- The View is defined in HTML, while the model and controller and implemented in JavaScript
- HTML templates with a ng-controller directive specifying a controller allow it to bind data from the model
- Factory methods allowed for asynchronous calls to grab JSON to use for our model
- Decouples view from model, controller binds to HTML

AngularJS Example

Binding in HTML:

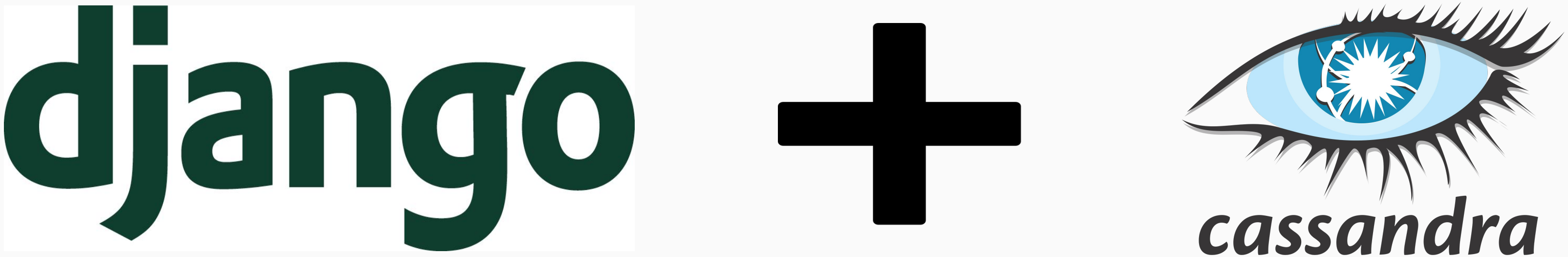
```
<h3>Latest Tweets For {{chartTitle}}</h3>
```

Declaration in controller:

```
$scope.chartTitle = Barack Obama
```

Displays → Latest Tweets For Barack Obama

Django + Cassandra + REST API



Abstract Factory - Django Models

- Way to encapsulate a group of individual factories with a common theme without specifying their concrete classes

- A factory is the location of a concrete class in the code of a concrete class in the code at which objects are constructed

Abstract Factory - Django Models

```
class Candidate(Model):

    __abstract__ = True

class Bernie(Candidate):

class Cruz(Candidate):

class Hillary(Candidate):
```

CNN Model Trainer

- Employs CNN feeding LSTM into an RNN language model. Brain.
- Trained on 200,000 tagged tweets. Accuracy: 84%. Humans can only agree on sentiment 80% of the time
- Very modular design: High cohesion, Low coupling. Adapter design pattern
- Allowed us to reuse a lot of code and identify bottlenecks quickly
- Created clusters of identical machines that could be threaded efficiently

Takeaways

Creating an object oriented REST API for our project worked well due to our roles

- querying database and formatting JSON data
- developing front end

Modular design allowed for seamless integration with no overlap