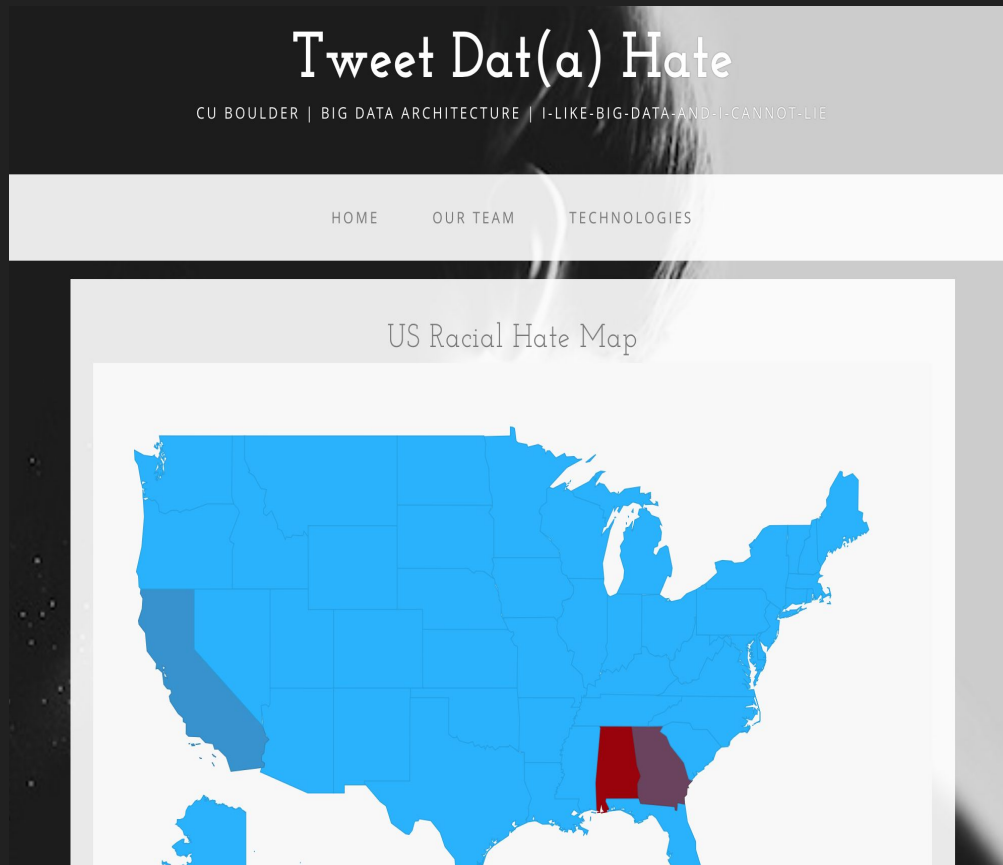# Tweet Dat(a) Hate

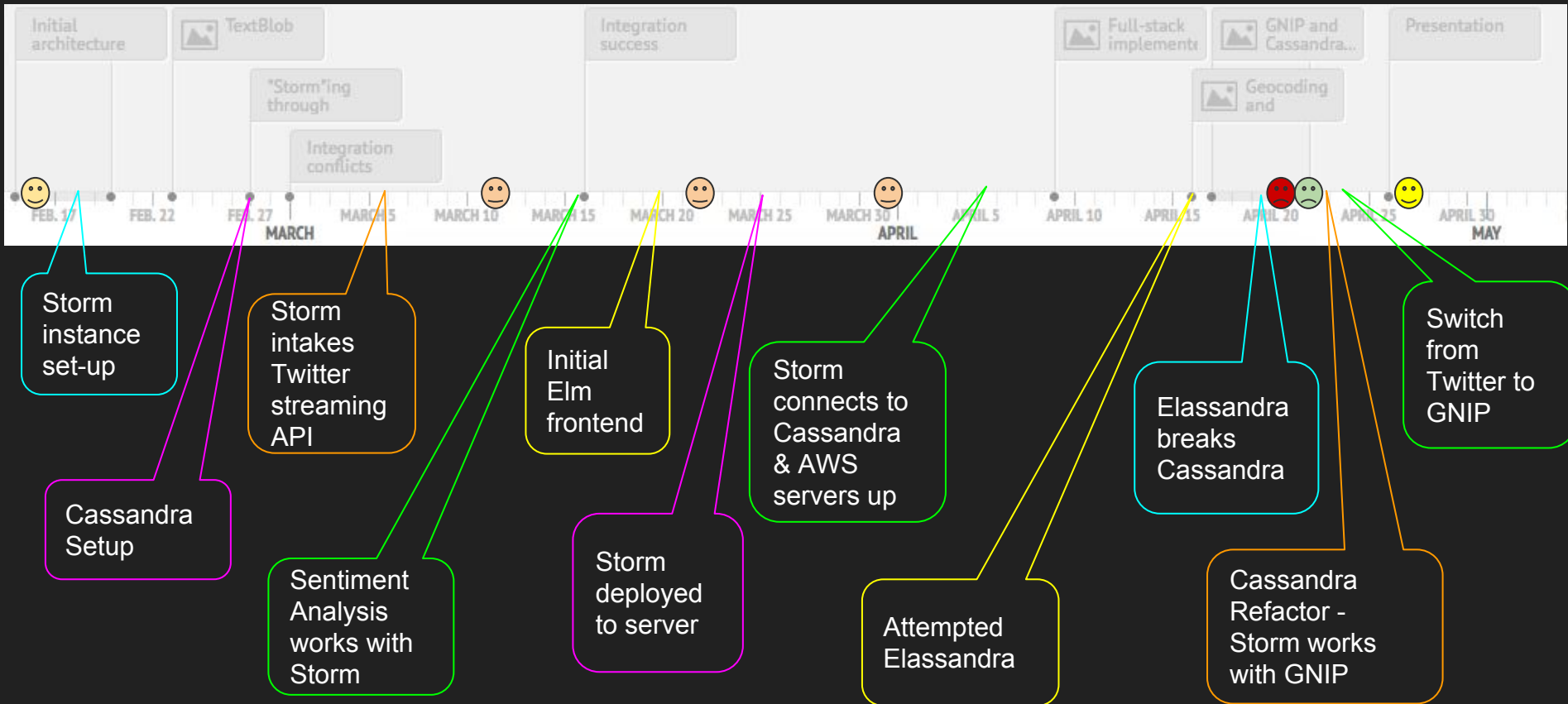Team: I-Like-Big-Data-And-I-Cannot-Lie

Amber Womack, Christina Nguyen, Erik Eakins
Joel Marquez, Michael Swisher

Story of Project

- Tweets with hate sentiment
- Full-stack streaming tweets
- Why it mattered to us?
  - Twitter allows people to express opinions/feelings
  - Visualize recent political sentiments and societal changes
  - Regional differences

Execution Timeline

Architecture

Storm

- Multi-language (Java, Python)
- Spout consumes GNIP Search API
  - 500 tweet objects/request
  - Broken down into single tweet objects & queued
  - Continuously makes GNIP requests using "next" token
- Formatter bolt
  - Scrapes only the info we require from tweet object
  - Formats into custom object
- Sentiment Analysis bolt
- Insert bolt
- Print bolt
  - Used to log errors from python bolts

```
TopologyBuilder builder = new TopologyBuilder();

builder.setSpout("twitter", new TwitterStreamSpout(gnipUser, gnipPass, gnipUrl));
builder.setBolt("formatter", new TweetFormatterBolt()).shuffleGrouping("twitter");
builder.setBolt("sentiment", new SentimentAnalysisBolt()).shuffleGrouping("formatter");
builder.setBolt("insert", new CassandraInsertBolt()).shuffleGrouping("sentiment");
builder.setBolt("print", new TwitterStreamPrint()).shuffleGrouping("insert");
```

APACHE STORM™

Cassandra

- Originally 3.0.12 and moved to Elassandra
- Deployed on new server, but ES failure
- Real Data changed to GNIP
- Python bolt will insert Tweet data to Cassandra

cassandra

Frontend

```elm
import Bootstrap.CDN as CDN
import Bootstrap.Navbar exposing (..)
import Bootstrap.Grid as Grid
import Bootstrap.Grid.Col as Col
import Bootstrap.Grid.Row as Row
import Html exposing (..)
import Html.Attributes exposing (..)
import Html.Events exposing (..)

main =
    Html.program
        { init = init
        , view = view
        , update = update
        , subscriptions = subscriptions
        }

-- MODEL
type alias Model =
    { tech: String
    , image: String
    }

-- UPDATE
type Msg =
    Title
    | Header String

update: Msg -> Model -> (Model, Cmd Msg)
update msg model =
    case msg of
        Title ->
            (Model "Tweet Dat(a) Hate" "", Cmd.none)
        Header newHeader ->
            (Model newHeader "", Cmd.none)

-- VIEW
view: model -> Html Msg
view model =
    Grid.container
        [style
            [ ("padding-left", "15px")
            , ("padding-right", "45px")
            , ("margin-left", "15px")
```
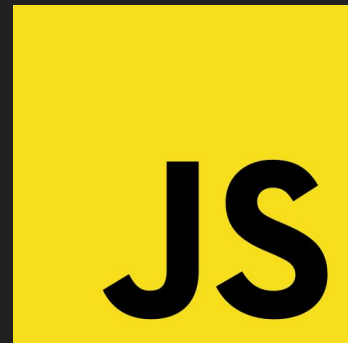
- Extra for learning technologies (Elm)
- Bootstrap library

Project Site: http://swishertest.site