Meeting #3

2/18/2022
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Deliverables

- Install:
  - MNE Library
  - dash-plotly
  - nltk and spaCy
- Download Box Data
- Use read_code from GitHub to get dataframes
- Make a simple Plotly dash display of graphs and anything you find interesting using the dataframes you get
- Share techniques from classes/research that can be used for ML/NLP

Outcomes

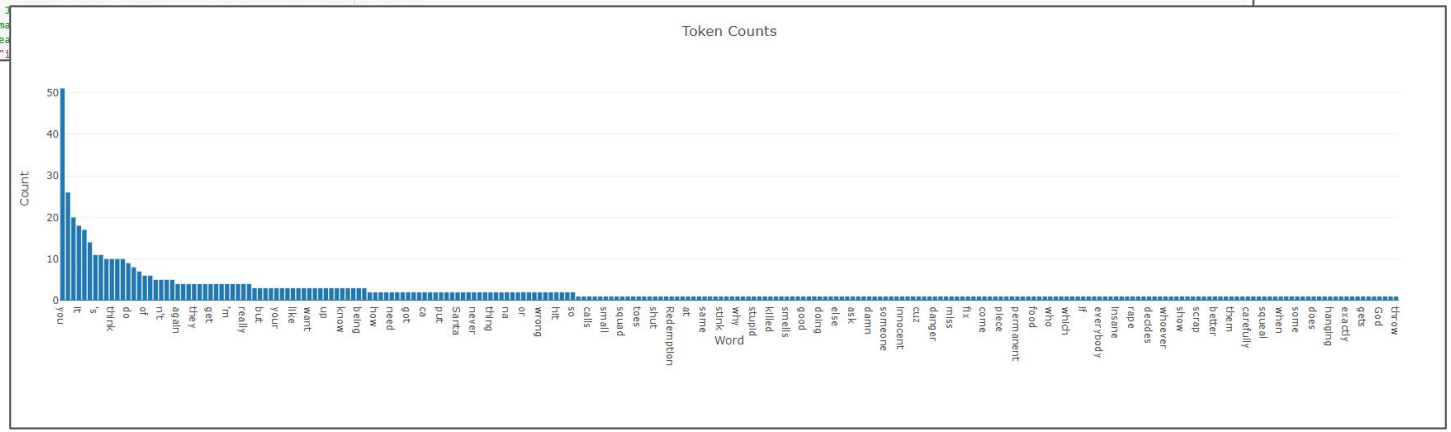
- Google Colab Document (The Demo)
  - Note: Installed jupyter-dash for Jupyter/Colab notebook compatibility
- Techniques to follow…

Demo

```
[7]
# Create app
app = JupyterDash("MINTS Thing")

# Realtime bug workaround from 11 hours ago, hot off the presses
# https://github.com/plotly/dash/issues/1907#issuecomment-1035931483
del app.config._read_only["requests_pathname_prefix"]

app.layout = html.Div(children=[
  dcc.Graph(
      id="Graph1",
      figure={
          "data": [
              {"x": sorted_unique, "y": list(usage_mapping[token] for token in sorted_unique), "type": "bar"} # This preserves order
          ],

          "layout": {
              "title": "Token Counts",
              "xaxis": {"title": "Word"},
              "yaxis": {"title": "Count"}
          }
      }
  )
])

###!!!! WARNING! The J
###!!!!          It ma
###!!!!          appea
app.run_server(mode="i
```

ATABOI: Auditory-Textual Analysis through Biometric Observational Inputs

Ok, even *I* think this one sounds kinda lame, and I'm the one who came up with it.
-- Tony



ML/NLP Techniques to Try

- Inference could go either way: predict most likely words given listener's biometrics, or predict how certain words will affect a listener's biometrics
  - Something like a bayesian network may be able to do both
- Different sources of biometric or speech data could vary due to differing participants, ages, time of day, etc.
  - Important to consider if the system is to be used on new data
- Other components of dashboard could include correlation between different biometrics, forecasts of biometrics over time, and level of uncertainty.