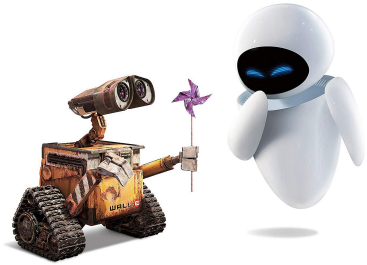
Chatterbot Chatbot

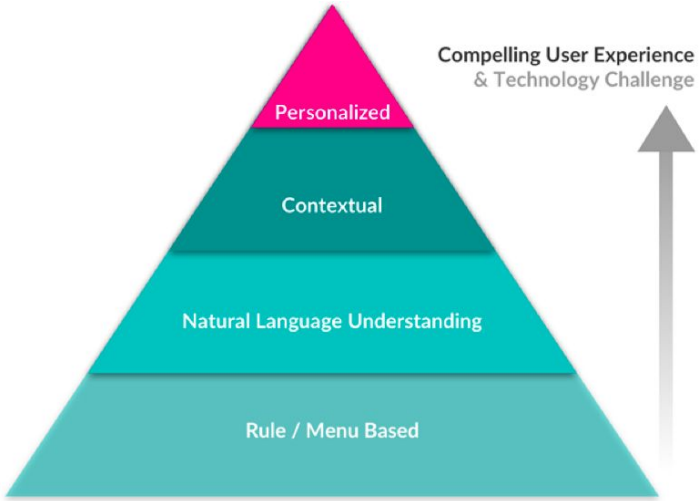
By Paulene Barnes



Background

History

- ELIZA
  - Created by Joseph Weizenbaum in 1966
  - Able to fool people into believing it was real
  - Acts as a Rogerian psychotherapist
- Types of chatbots
  - Rule/Menu Based
  - Natural Language Understanding
  - Contextual
  - Personalized



Problem Statement

With the world becoming more technologically advanced and more people staying home due to current world events, chatbots may provide companies with much needed support for customer interactions. Chatbots can help field basic questions from potential clients in order to ease the workload and support company employees. Many people, especially now, are looking to enhance their skills or change careers. How well can a trained Chatterbot chatbot field questions regarding programming at...

General Assembly!

Web Scraping

Scraping General Assembly

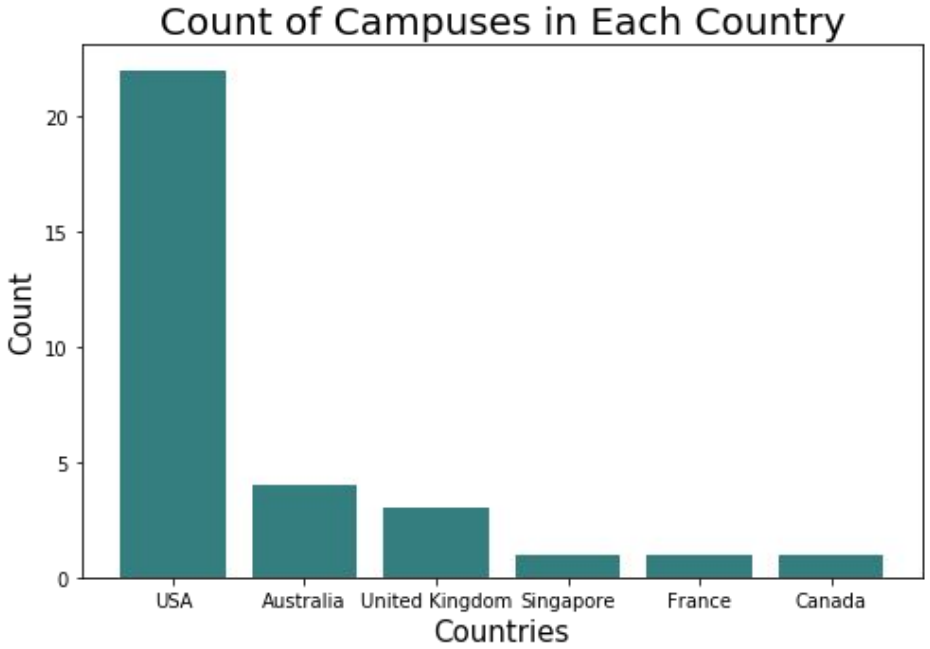
- 32 campus locations
- Each URL begins with
  - https://generalassemb.ly/locations/(city)
- Singapore
  - Tanjong Pagar
  - Orchard
- Sites were scraped for
  - Phone number
  - Email address
  - Physical address
  - Full-time programs
  - Part-time programs

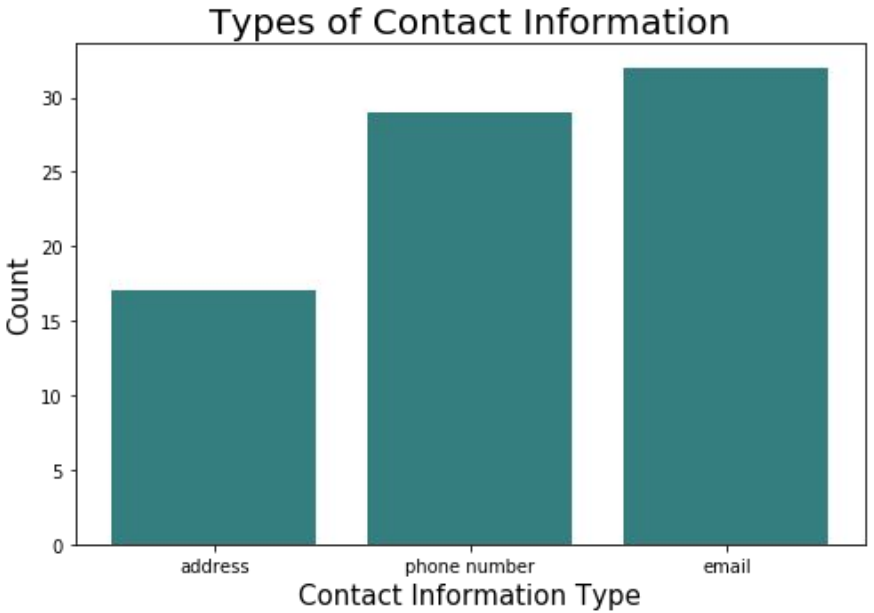
- 15 programs
  - 4 full-time courses
  - 11 part-time courses
- Each URL begins with
  - https://generalassemb.ly/education/(program)
- Sites were scraped for program descriptions

- Created a for loop to pull a request for each city, then each program

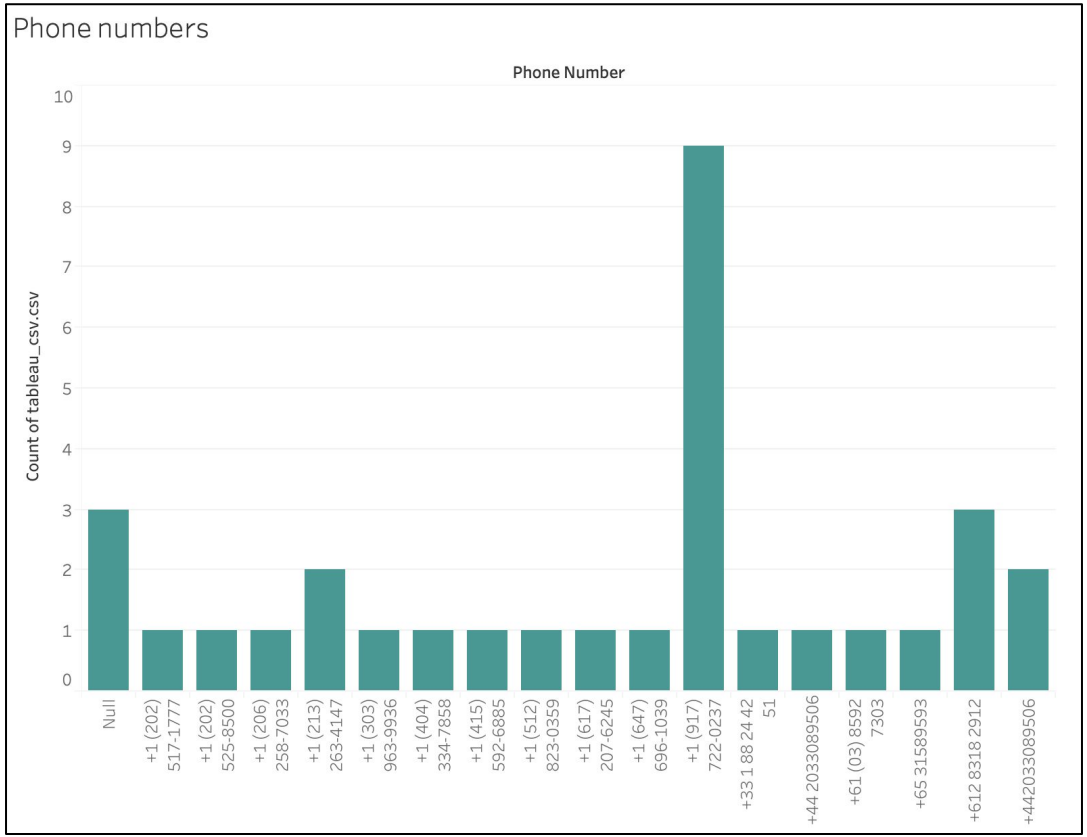
EDA and Tableau

EDA - Locations and Types of Contact Information

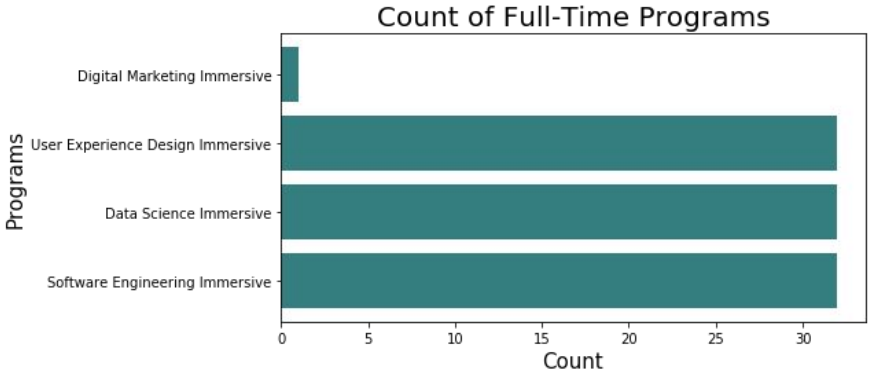




EDA - Phone Numbers



EDA - Programs



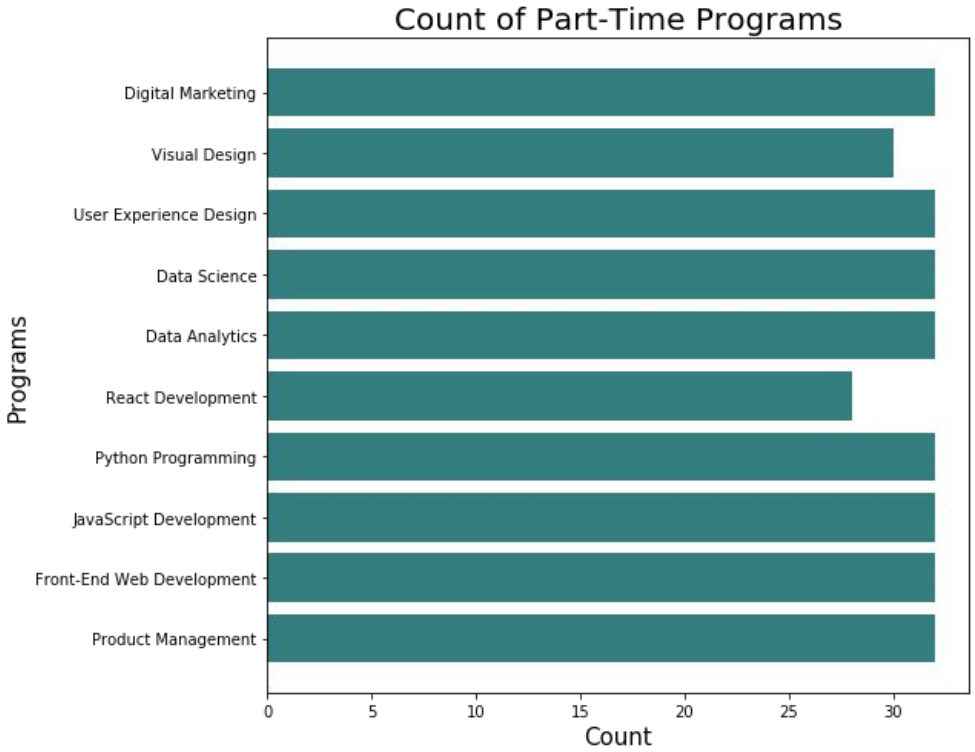
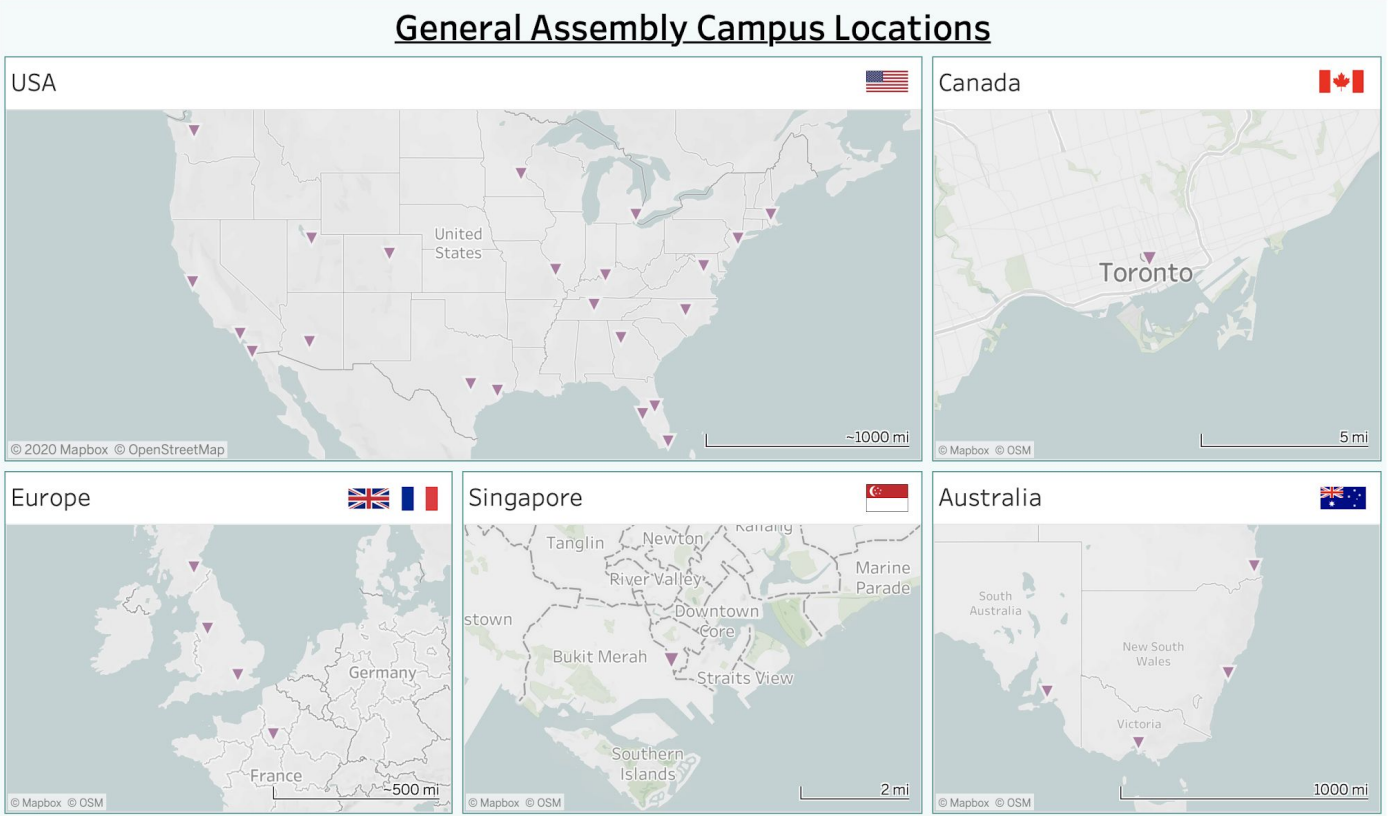


Tableau Public (click image)



Formatting the Data for Training

.txt and .yml

- Remove quotation marks from python string formatting
- Convert to .txt
- Convert to .yml (YAML)

```
- - What locations are available in California?
  - In California, General Assembly locations are available in Los Angeles, San Diego, San Francisco, and
online.
- - What locations are available in Texas?
  - In Texas, General Assembly locations are available in Austin, Houston, and online.
- - What locations are available in Florida?
  - In Florida, General Assembly locations are available in Miami, Orlando, Tampa, and online.
```

```
categories:
- General Assembly General Information
conversations:
- - What locations are available in California?
  - In California, General Assembly locations are available in Los Angeles, San Diego,
    San Francisco, and online.
- - What locations are available in Texas?
  - In Texas, General Assembly locations are available in Austin, Houston, and online.
- - What locations are available in Florida?
  - In Florida, General Assembly locations are available in Miami, Orlando, Tampa,
    and online.
```

Training and Interaction

Training and Interaction

- Chatterbot corpora
  - AI
  - Botprofile
  - Computers
  - Conversations
  - Greetings
- Custom corpora
  - General GA information
  - GA course information
- ListTrainer
  - Specific responses

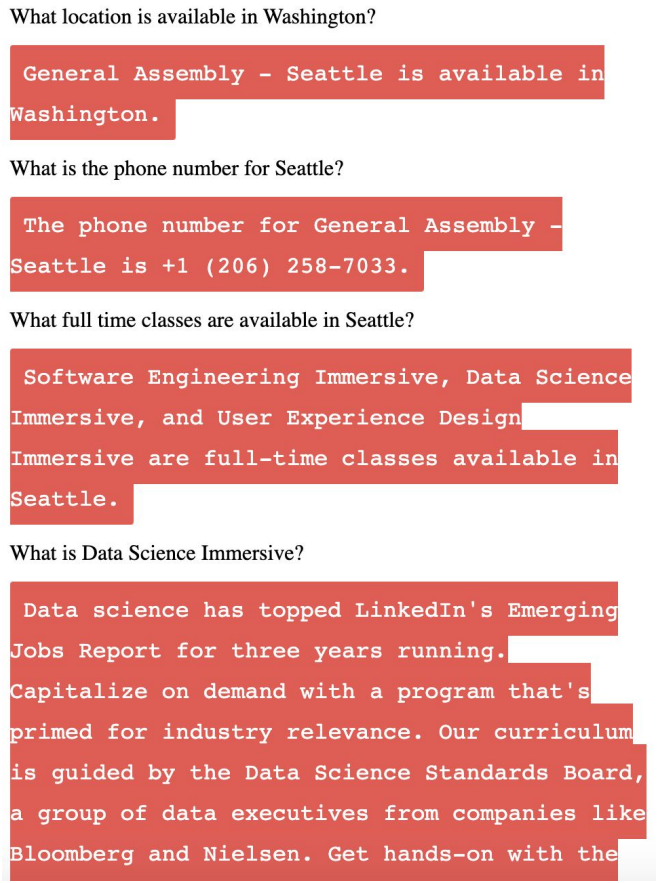
- Logic adapters
  - Best Match
  - Jaccard Similarity
  - Default statement
  - Maximum similarity threshold

```
You:  What part-time classes are in Melbourne?
GA Bot:  Sorry, I am not sure of the answer. For more information visit the website: gener
alassemb.ly
You:  What part-time courses are available in Melbourne?
GA Bot:  Product Management, Front End Web Development, JavaScript Development, Python Pro
gramming, React Development, Data Analytics, Data Science, User Experience Design, Visual
 Design, and Digital Marketing are part-time courses available in Melbourne.
You:  What is the phone number for London?
GA Bot:  The phone number for General Assembly - London is +44 2033089506.
You:  What full time classes are available in Atlanta?
GA Bot:  Product Management, Front End Web Development, JavaScript Development, Python Pro
gramming, React Development, Data Analytics, Data Science, User Experience Design, Visual
 Design, and Digital Marketing are part-time classes available in Atlanta.
You:  Where is General Assembly in Atlanta?
GA Bot:  The address for General Assembly - Atlanta is 675 Ponce De Leon Avenue NE, 2nd Fl
oor, Atlanta, GA 30308.
You:  What is the phone number for Atlanta?
GA Bot:  The phone number for General Assembly - Atlanta is +1 (404) 334-7858.
You:  What is Visual Design?
```

Flask

Flask Deployment

- Formatting Chatterbot for Flask
- Issues pushing the app to Heroku and Django
- Watch the demo: https://youtu.be/NmjOmBH0bLg



Challenges and Next Steps

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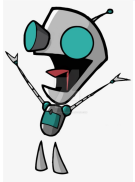
- Formatting the data to YAML
- Limited responses depending on the training
  - Can “learn” from user conversations
- Formatting HTML/CSS and Heroku/Django deployment
- Next steps
  - Additional training and refinement of scripts from General Assembly regarding their programming
  - Implement the program on Heroku or Django
- Chatterbot has a lot of great qualities and could be a powerful tool used to interact with future General Assembly students to field frequently asked questions about the programs

QUESTONS