Laura Fulton
Final Project PUI, Fall 2019

Link to site: https://laurafulton.github.io/puifinal/accentylon.html
Github files: https://github.com/laurafulton/laurafulton.github.io/tree/master/puifinal

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Part 1: Project Description

I. Purpose: “Accentylon” is a site to easily explore accents from around the world. Language diversity is naturally part of human-human interaction. Virtual agents (human-computer interaction) only communicate with a subset of voices and Accentylon is exploring how text to speech (TTS) accents could be used for educational and exploratory purposes.

II. Information to Convey: The goal of the site is to raise awareness about the limited diversity of accents represented in today’s virtual assistants. Through the use of several key components: Google Maps API, in-browser speech synthesis, and visuals (animation and custom look for the map and it’s dsplay cards), the features of Accentlyon come together.

III. Interactions: Accentlyon is interesting and engaging through an interactive map that has display cards for users to craft and hear messages. The interactive map lets users navigate and pick countries. After selecting a country, users enter type messages and then hear them spoken in the local accent. Users can create new messages and visiting over 20 select countries (as displayed in you the Beta version of Accentylon).

IV. Target Audience: Accentylon is great for people who are curious about speech and exploring language. Accentylon is not focused on translation, and specifically, it brings light to some of the unique TTS capabilities modern-day browsers support.

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Part 2: Describing User Interaction

1. The site loads as a **responsive web page.** On the home page, the user is greeted with an animation of a sine speech wave and a brief description. Learn More text peaks above the fold with a bouncing down arrow to indicate there's more!
2. Next, the user sees three instructions of how to interact with the map which is generated with the **Google Maps API** .
3. There are location markers generated by latitude and longitude coordinates which indicate over 20 different countries on the Map. By clicking the location marker, an information window pops up and then a user enters text and hears their text spoken through **Speech Synthesis API** with an accent.

   Here's an example interaction :
   a. Scroll down to the Map.
   b. Click the location marker for Australia.
      i. Type in the text box "What is up?"
      ii. Turn computer (or phone as this is a responsive web page) volume up
      iii. Click "Say it!"
      iv. Hear the phrase spoken out loud
      v. Navigate to another country of choice, this time try "thank you for a great semester of PUI". From user feedback, Accentylon also works well to explore what it would sound like to pretend you're on the Bachelorette. Navigate to Britain and try "Hello beautiful"

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Part 3: External Tools

Google Maps API. Chosen as way to easily implement a responsive map that could have custom styling and information window content. I call the map in my HTML through a custom Key and customized the map through Javascript in my file called “map.js” . Google Google Maps Platform | Google Developers turned out to be an essential resource which showed me how to put locations on the map, customize infowindow information, and even style the map Styling Wizard: Google Maps APIs.

Speech Synthesis API. This API relies on the browser synthesis which is available in modern browsers https://flaviocopes.com/speech-synthesis-api/. To get accent codes I relied on http://www.lingoes.net/en/translator/langcode.htm to add accent codes to my variables for places. For example, for Arabic I’d define geometry latitude and longitude and the accent “ar-EG” . “ar-EG” is used as the speech language for Speech Synthesis Utterance.

Bootstrap. Chosen as a way to ensure header info and visual content outside the map (already responsive) change dynamically with browser sizing.

Animation: used for visual intrigue. For sine wave on main page, as noted in comments on code as well, modified from pen by Issuttel as found on CodePen, edited for coloring and sizing https://codepen.io/isuttell/pen/OPVELL

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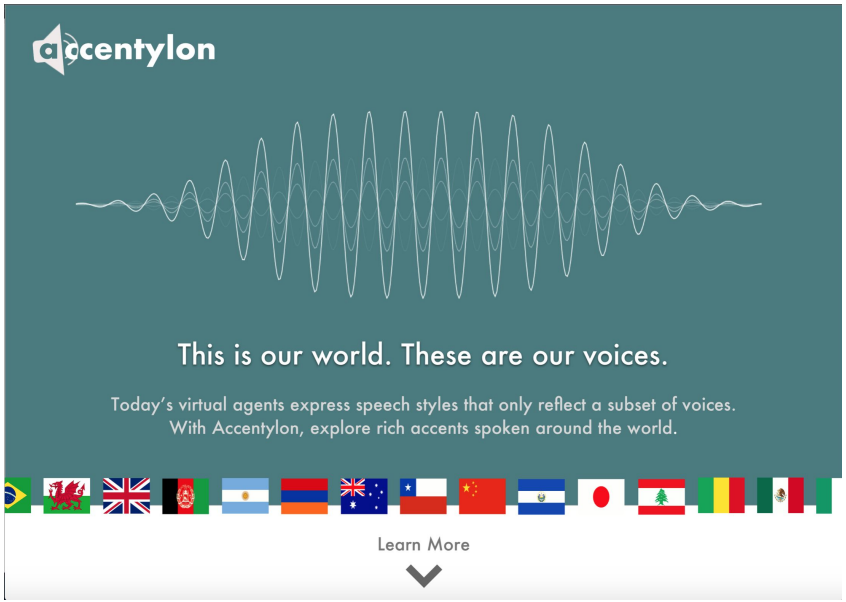
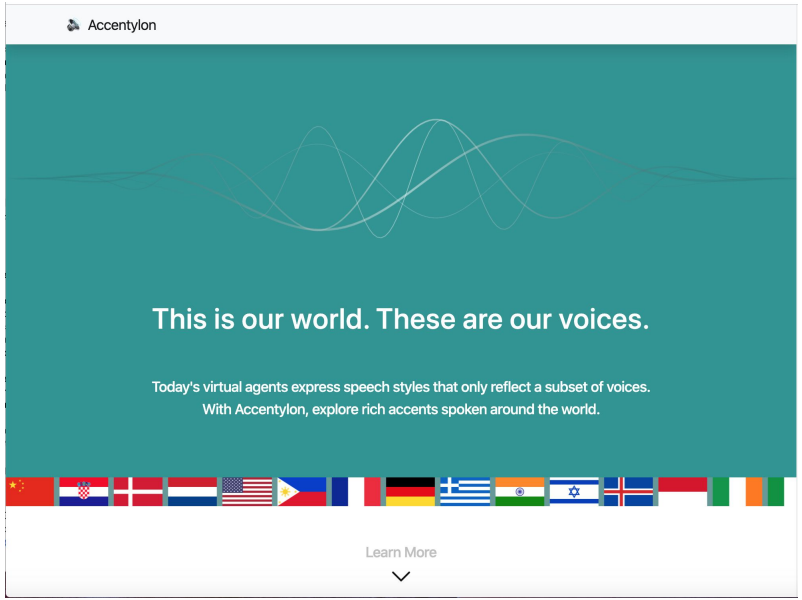
Part 4: Iterating on Assignment 7 Mock-Ups (Slide 1 of 2)



Mock-Up



Coded Responsive Web

Stayed the same: general idea of landing page
Updated: more attractive visual logo and background teal color, animation wave and for bouncing arrow

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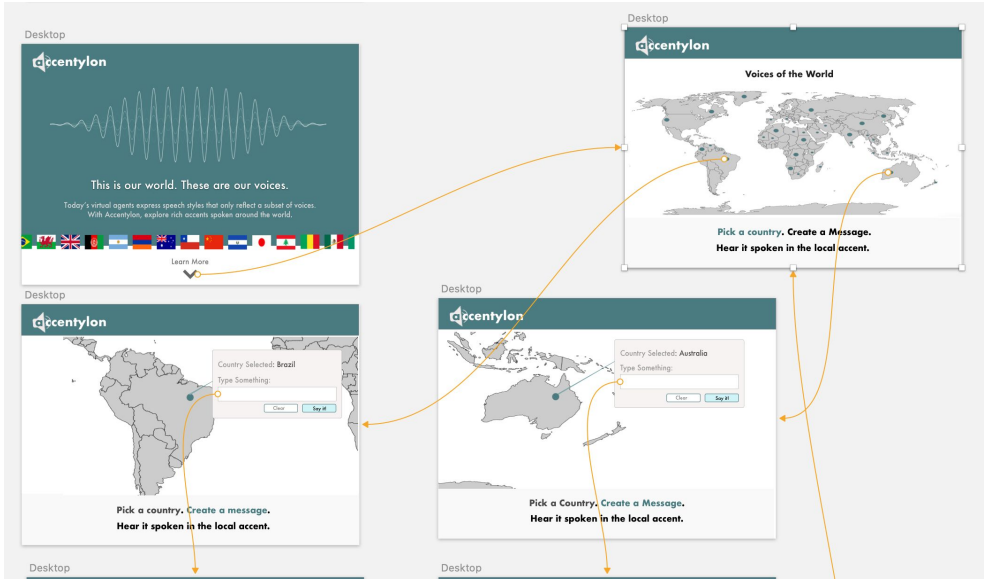
Part 4: Iterating on Assignment 7 Mock-Ups (Slide 2 of 2)



Mock-Up

Coded Responsive Web

Stayed the same: general idea of visiting a country and then entering TTS info
Updated: moved instructions above the map, edited map styling, markers are more clear, stays on map when country pop-up appears versus going to new page (from feedback for mock-up)

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Part 5: Challenges

It was a journey to make the mock-up vision come to reality to be functional as well as visually consistent.

Some challenges included

- Getting a custom info window to show up for markers on the Map,
- Understanding how to have onclick functionality to bring up marker info and then have an onclick button inside (learned about a fun term called bubbling https://javascript.info/bubbling-and-capturing)
- Making sure the right accent from place variables got read into my function for TTS along with the text from the info window.

Thank you very much! Have a great winter break 😊