
Rhetoric

A single page web app for speech analysis

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Comp86 - OOP for GUI

Project Proposal

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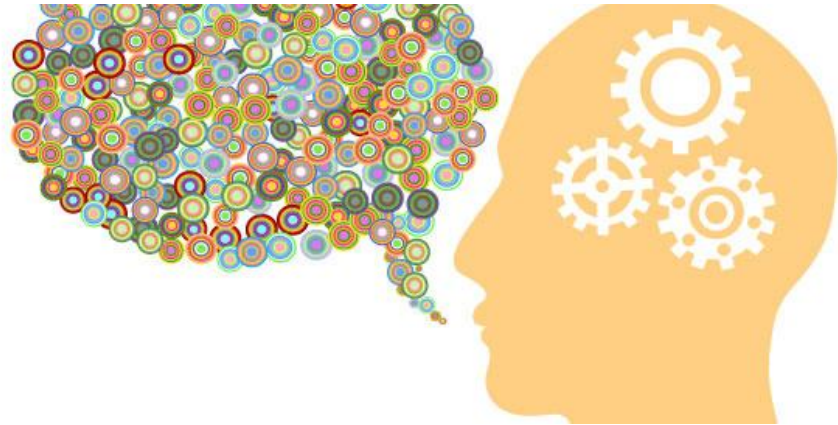
**How fast can we interpret
and visualize the meaning
behind human speech?**

...Instantly! (almost)

(With a little help from computing and the power of the web)

Project Idea

A single page web application that analyzes live speech and visualizes ideas *in real time*



How it will work:

1. Speech converted to Text

Rendered in the browser immediately



2. Text Analyzed for Ideas

Overall topic, concepts, keywords, people, organizations, sentiments



3. Ideas Visualized

A network graph that explores relationships between ideas

TIME FOR A LIVE DEMO.

Rhetoric

“
Converts speech to text.

💡
Analyzes text for ideas.

🔗
Visualizes relationships
among ideas in real time.

Start

Stop

Reset

🎤 Live Speech

“
and the chairman of the Joint Chiefs of Staff to develop a comprehensive plan to protect America's vital infrastructure from cyber attacks and all other form of a tax on immigration I will direct the Department of Labor to investigate all abuses of these are programs that undercut the American worker on ethics reform as part of our plan to drain the swamp we will impose a five-year ban on Executive officials becoming lobbyist after they leave the administration and a lifetime ban on Executive officials lobbying on behalf of a

”

📄 Transcript

The restore Outlaws and bring back our jobs about time these include the following on trade I am going to eat you are notification of intent to withdraw from the trans-pacific partnership a potential disaster for a country instead we will negotiate their bilateral trade deals that bring jobs and industry back onto American Shores on energy I will cancel job-killing restrictions on the production of American Energy including shell energy and Clean Coal creating many millions of high-paying jobs that's what we want that's what we've been waiting for one regulation I will formulate a rule which is that for everyone new regulation to Old regulations must be eliminated so important And the chairman of the Joint Chiefs of Staff to develop a comprehensive plan to protect America's vital infrastructure from cyber attacks and all other form of attacks on immigration I will direct the Department of Labor to investigate all abuses of these are programs that undercut the American worker on ethics reform as part of our plan to drain the swamp we will impose a five-year ban on Executive officials becoming lobbyists after they leave the administration and a lifetime ban on Executive officials lobbying on behalf of a

⚙️ Analysis

Topics
1
unrest, conflicts and war - crisis

People

Keywords
27
American Energy
Jobs

Graph

USE CASES:

A lot of text can be quickly aggregated and analyzed for human benefit. **What about spoken data?**

Who might benefit from
UNDERSTANDING
MILLIONS OF PEOPLE
speaking at the same time?

Using speech from...

- ❖ *Newscasts*
- ❖ *Podcasts*
- ❖ *Youtube Videos*
- ❖ *Public speeches*

...and extracting

- ❖ *Big ideas*
- ❖ *Sentiments*
- ❖ *Keywords*
- ❖ *People*
- ❖ *Organizations*
- ❖ *Social trends*



Economic Analysts.

People trying to quickly identify human sentiments about the direction of the market



News Analysts.

People looking to distill ideas from speeches by leaders and public figures



Medical Professionals.

People trying to identify patterns and relationships between described symptoms

Nuts & Bolts

→ Basic Web Technologies

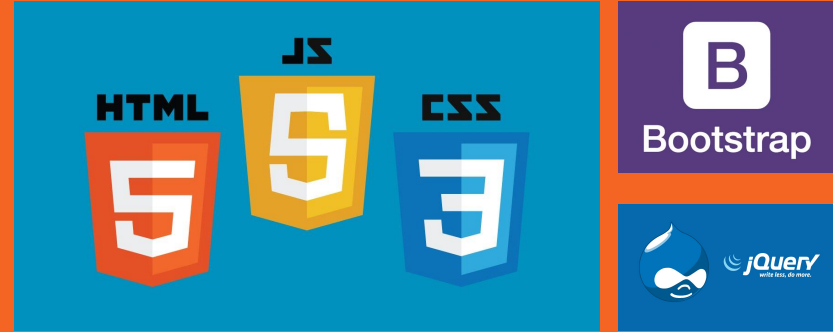
Programming & Markup
Languages

→ APIs & Libraries

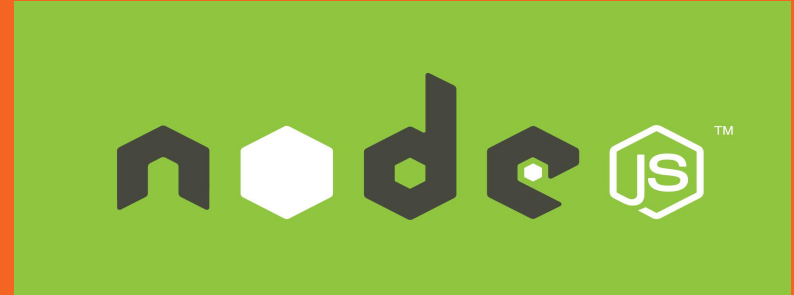
Speech recognition
Text analysis
Network graphing

Basic Web Technologies

Client Side



Server Side



AYLIEN

Aylien Text Analysis API



Speech recognition API



Visualization Library

APIs & Libraries

Testing & Debugging



Chrome
Developer Tools



Soundflower

OOP Design

Using ECMAScript 6 Classes

Classes & Inheritance

Speech Recognition

HTTP Router

Parser

Entity Parser

Classify Parser

Concepts Parser

Hashtag Parser

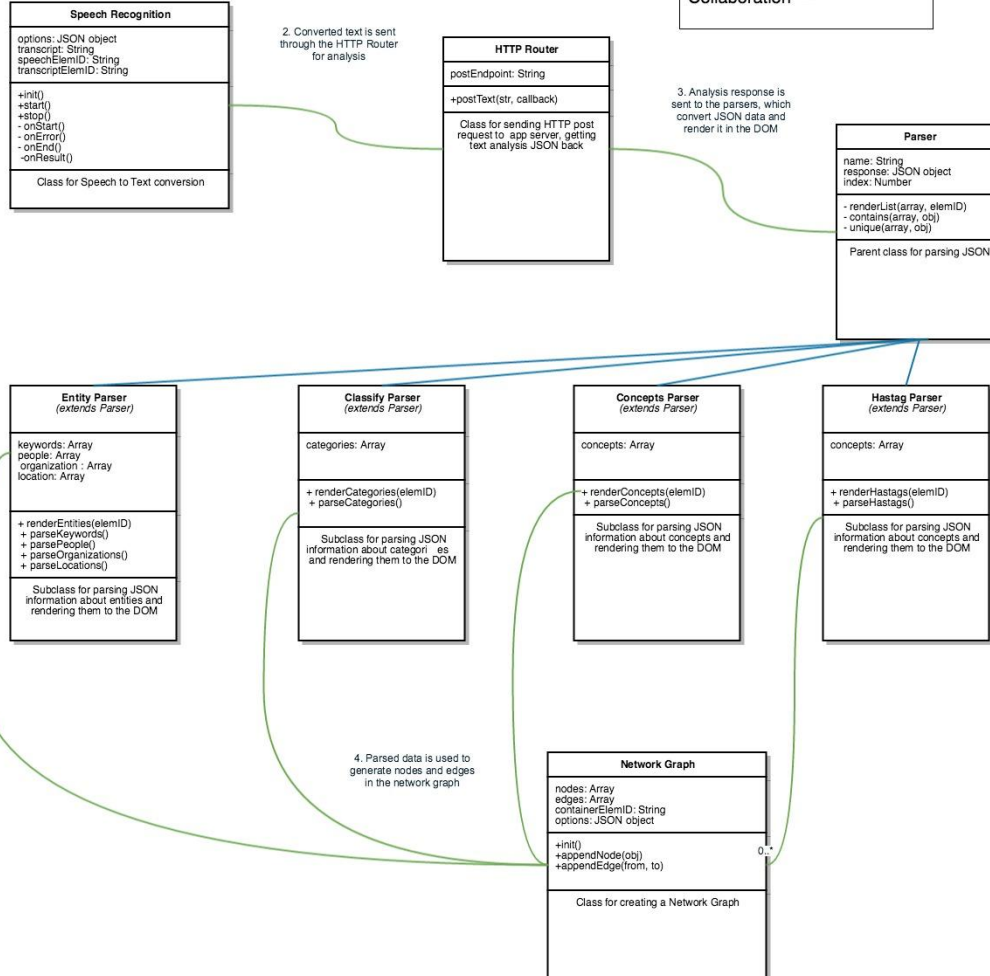
Network Graph



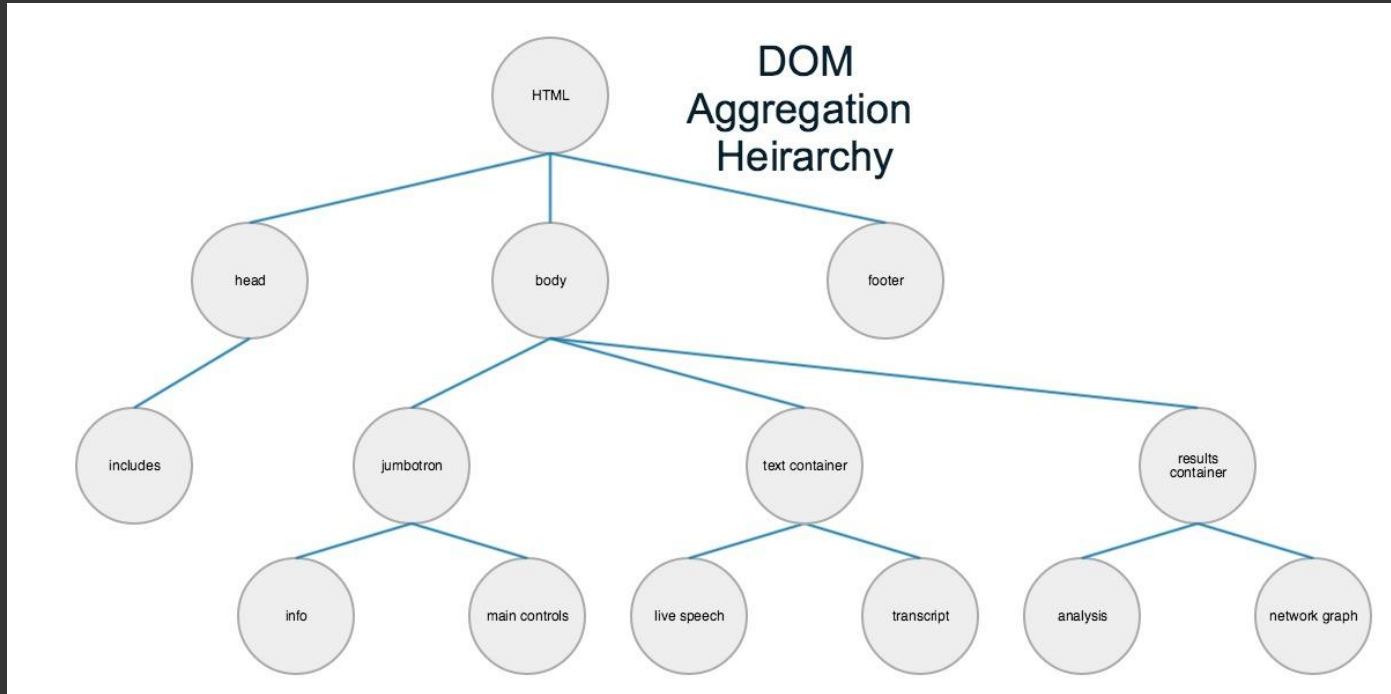
Class Diagram

Inheritance

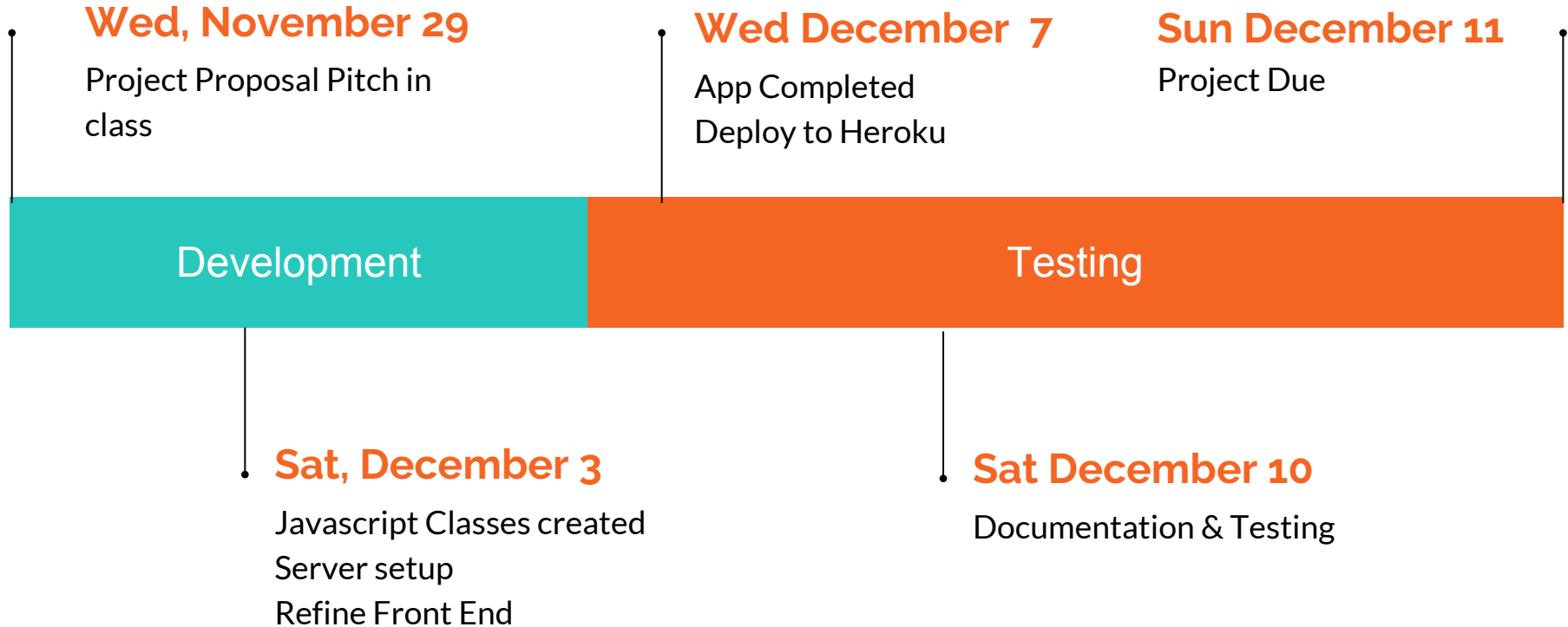
Collaboration



HTML DOM Aggregation



Project Schedule



What are your thoughts on...

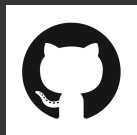
Design?

Technical
Risks?

Testing?

Thanks for **listening!**

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<https://github.com/jroth01>



<https://www.linkedin.com/in/justin-roth>