

Twitter for Visually Challenged

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Overview

- Social networking websites play a vital role in connecting the world together.
- Visual information is the basis of most of the social networking websites and hence, the visually challenged people are at a loss.
- This project aims at building a software providing a verbal and audio based interface for Twitter in order to help visually challenged people connect to the world.

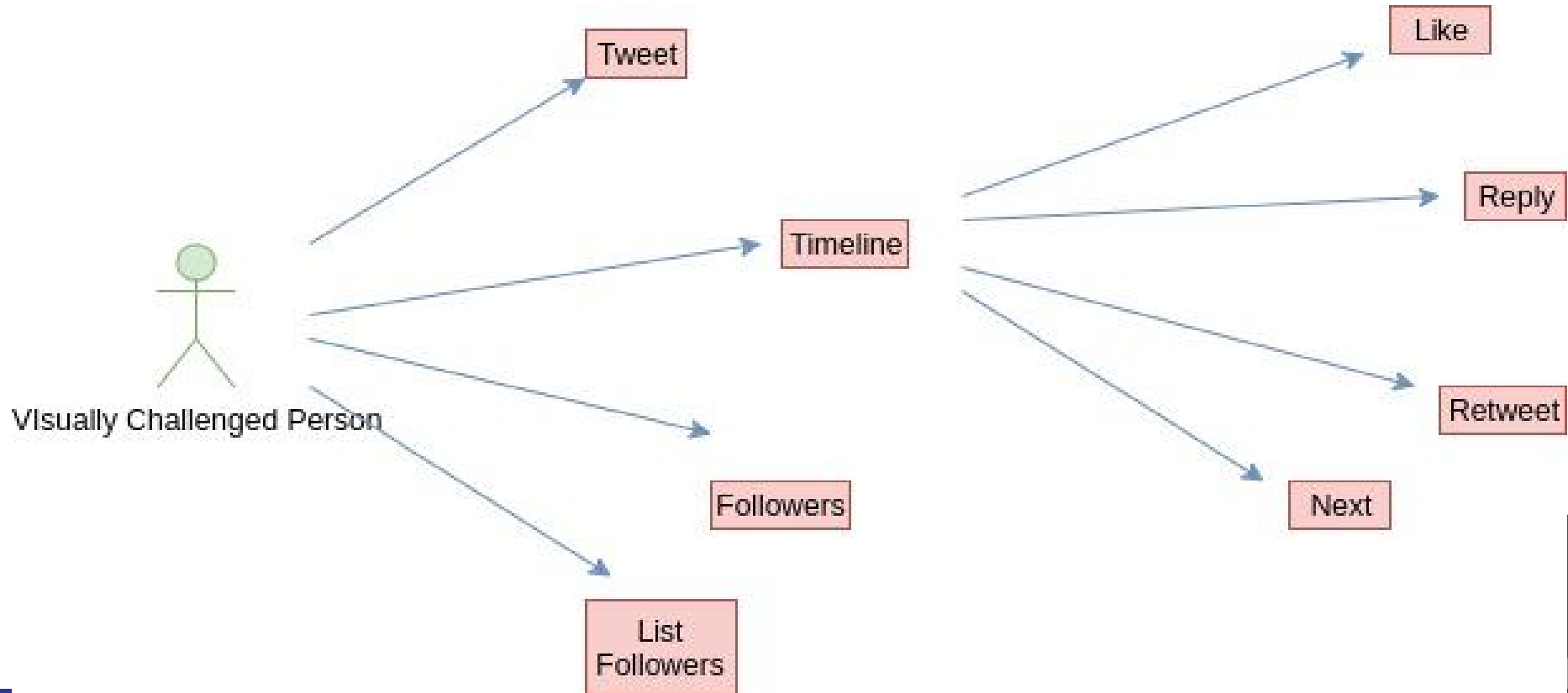


Technologies used

- IBM Watson APIs
 - Conversion of speech to text
 - Conversion of text to speech
- Twitter API
 - Functionalities provided by twitter

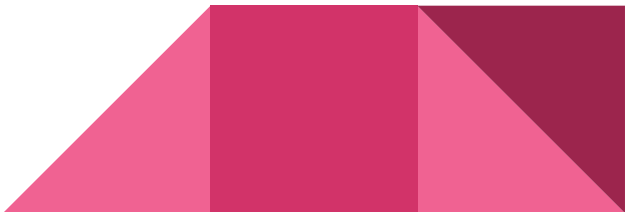


Use Case Diagram



Features

When we run the software, it will prompt the user with 4 options, to which they have to reply verbally-

- “a” for posting a new tweet
 - “b” for listening to the tweets on the user’s timeline. For each tweet on the timeline, there will be
 - Like
 - Reply
 - Retweet
 - Next
 - “c” for following someone
 - “d” for getting all the current followers of the user.
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Tweet

- This feature will be activated if the user says “a”.
- The system will first ask the user the twitter handle of the person, if any, to whom the tweet is addressed. The user will then say the twitter handle of that person.
- If the tweet is not addressed to anyone in particular, the user can simply say “no recipient”.
- Then, on the subsequent prompt, the user will say the tweet out loud.
- The system will then post the tweet on the user’s behalf.



Read Timeline

- If the user says “b”, this feature will be activated.
- The system will start reading the tweets from the user’s timeline sequentially.
- After reading each tweet, three options will be given to the user regarding the tweet just read-
 - Like
 - Reply
 - Retweet
 - Next



Timeline continued...

- Like: If the user says “Like”, the tweet will be liked. The system will then go on to read the further tweets
- Reply: If the user says “Reply”, this feature will be activated. After prompt, the user will say the reply aloud. The system will then post this reply on user’s behalf.
- Retweet: If the user says “Re” the current tweet will be retweeted on user’s behalf.
- Next: If the user says “Next” move to next tweet.



Follow

- This feature will be activated if the user says “c”.
- The system will prompt the user to say the twitter handle of the person to be followed.
- The user will then start following that person.



List Followers

- This feature will be activated if the user says “d”.
- The system will start reading the names of all the followers of the user.



Challenges Faced

- Twitter api was complex and not easy to use.
- The speech api performs best for american accent.
- Problems with tweets in language other than english.
- Minimising the run time of the program.



Future Scope

- This project is limited to tweeting and reading only text in tweets.
- With further advancements in science and technology, this project can be extended so that the gist of the information available in the images and videos accompanying the tweets can be conveyed to the user verbally.

