Journal Report 8 10/25/19 - 11/08/19 Arnav Bansal Computer Systems Research Lab Period 5, Bansal

Daily Log

Monday October 28

Continued to fetch transcripts from both the code and the demo site, updating the spreadsheet dataset.

Wednesday October 30

Continued to fetch transcripts from both the code and the demo site, updating the spreadsheet dataset. Also continued exploring and getting acquainted with the various documentations of the following APIs for text summarization, the next major task in our project: https://deepai.org/machinelearning-model/summarization, https://www.meaningcloud.com/products/automatic-summarization, https://aylien.com/text-api/summarization/.

Friday November 1

Continued to fetch transcripts from both the code and the demo site, updating the spreadsheet dataset. In addition, continued looking into the Mellin and discrete cosine transform algorithms for audio processing for the future to compare preprocessing effects on accruacy and hopefully have even more accurate models working if our proof of concepts first works with text summarization as well.

Friday November 8

Continued to fetch transcripts from both the code and the demo site, updating the spreadsheet dataset. Started trying to implement some basic functions from the deepAI and meaningcloud text summarizations above in Python, resolving some bugs with importants and model parameterization and usage. Also continued looking for other APIs on IBM Watson's list and elsewhere online.

Timeline

Date	Goal	Met
October 25th	Start researching for initial parts of	Yes, found free API's for text sum-
	the video transcript summarization	marization and explored their doc-
	and in tandem, continue to build the	umentations and looked more into
	dataset over time	audio processing algorithms for pre-
		processing/normalization for results
		comparision in the future as we try to
		optimize the algorithm
November 1st	Decide on a text summarization API	Yes, decided to initially start with the
	and start to implement code/API re-	deepAI and meaningcloud APIs and
	quests on a test TED transcript I have	still continuing to look for others in
	in the dataset and continue to scale	tandem while also continuing to scale
	dataset in parallel	the dataset with transcripts from IBM
		Watson and the demo site
November 8th	Discuss with Mr. White whether need	No, haven't discussed with Mr.
	to go about implementing Mellin and	White yet, will actually do so later on
	Discrete Cosine Transform or any	when we get to comparing results of
	other audio processing algorithms;	our models' preprocessing once our
	checkpoint: have a successful sum-	initial proof-of-concept is working for
	marization working and determine	text summarization as well.
	what next steps are if any issues arise;	
	continue to scale dataset in parallel	
November 15th	Continue to research text summariza-	
	tion APIs and algorithms, continue to	
	scale transcripts dataset in parallel	
November 22th	Start implementation of algorithm	
	utilizing decided upon APIs's vari-	
	ous methods and comparing results,	
	continue to scale transcripts dataset	
	in parallel	

Reflection

Starting this text summarization component of our project has been fun as it's fresh and new challenges to resolve and APIs to explore. Hopefully I can rather quickly find a robust API as we eventually did with IBM Watson for speech-to-text and start making queries using our transcripts dataset as input. I'll continue to scale the dataset in tandem as well, of course. Looking forward to another great, productive quarter ahead!