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Portfolio Web Crawler

- 1) The way that I created the knowledge base was by first determining the most frequent words in all 15 URLs that were explored by the algorithm. After using a dictionary to calculate the frequency of all the words present in the URLs I retrieved the top 40 and manually determined the top 10 relevant words in all the texts. Furthermore, I have also been keeping track of all the sentences in all 15 URLs so I simple word-tokenized all the sentences and checked to see if a word from the top 10 words list is in the sentence. I simply appended the sentence to an array. This array is stored as a value in a dictionary where it can be easily referenced by the key which is a word from the top 10 keywords list. This was we have a list of all the sentences in which the word was used.
 - a) Final 10 words on the topic of Muhammad Ali are:

['ali', 'muhammad', 'fight', 'vs', 'clay', 'boxing', 'frazier', 'heavyweight', 'title', 'greatest'] Screenshot of Knowledge Base [ali]

the muhammad ali center in louisville ', 'i had been privileged to be asked to consult for the center s education programs in the planning process ', 'we were back there for muhammad s th birthday party ', 'at our table was a young mechanic who told us he had driven hours just to be there in the presence of his hero ', 'one of the great honors of my life was to be asked to deliver one of a handful of toasts to him that night ', 'i told ali that he is one of two people in my lifetime who have been able to bring people together no matter the color of their skin the faith they follow their age education or income ', 'the other was nelson mandela ', 'i told ali that after i attended mandela s inauguration in may i accompanied him to a stadium in johannesburg to watch a zambia south africa soccer match ', 'i told mandela then about how i held him and ali in such high esteem ', 'president mandela responded "if i was in a crowded room with ali i would stop what i was doing and go to him ', 'he is the greatest "', '" i told ali that he is one of two people in my lifetime who have been able to bring people together no matter the color of their skin the faith they follow their age education or income " richard lapchick says ', 'ap photo/john rooney in a world filled with fear and hatred troy yocum a veteran of the iraq war captured the power of muhammad ali that night when he made a toast ', 'yocum told us that when he was a teenager his mother bought him a poster of ali and explained to him how hard ali worked to beat the odds to become the champ ', 'yocum s mother he said hoped it would inspire her son to overcome some of the obstacles in his life ', 'each time he became discouraged he stood by the poster and got a dose of ali inspiration ', 'yocum was a soldier back from fighting in a distant war with his american brothers and sisters ', 'he told us how looking at the poster in his tent reinforced his courage to

2) write up a sample dialog you would like to create with a chatbot based on your knowledge base

Sample Conversation:

Bot: Hey Do you know Muhammad?

User: Muhammad who?

Bot: Muhammad Ali, he was the greatest heavyweight fighter

User: Interesting, who did he fight?

Bot: His most famous fight was with Clay for the heavyweight title

User: Nice. What kind of fight was it?

Bot: It was a boxing fight with Clay for the heavyweight title

User: Was he good?

Bot: Mandela said he was the greatest of all time!