



HEADLINE GENERATION

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HEADLINE GENERATION

- Generates a headline by processing a given article
- Summarize the article using:
 - Text Rank
 - Lex Rank
- Generate headline from summarized article using:
 - Hedge Trimmer
 - Keyword extraction



TEXT RANK

- Generates most important sentences & key phrases
- Builds a graph on based on Sentences/Words
- Graph edges describe the similarity between the Sentences/Words
- Applies PageRank to the graph to determine important sentences & key phrases
- Utilizes NLTK & NetworkX packages



LEX RANK

- Generates top k sentences
- Constructs a matrix to identify and get rid of similar sentences
- PageRank is run to rank those sentences
- Utilizes NLTK and FuzzyWuzzy packages



HEDGE TRIMMER

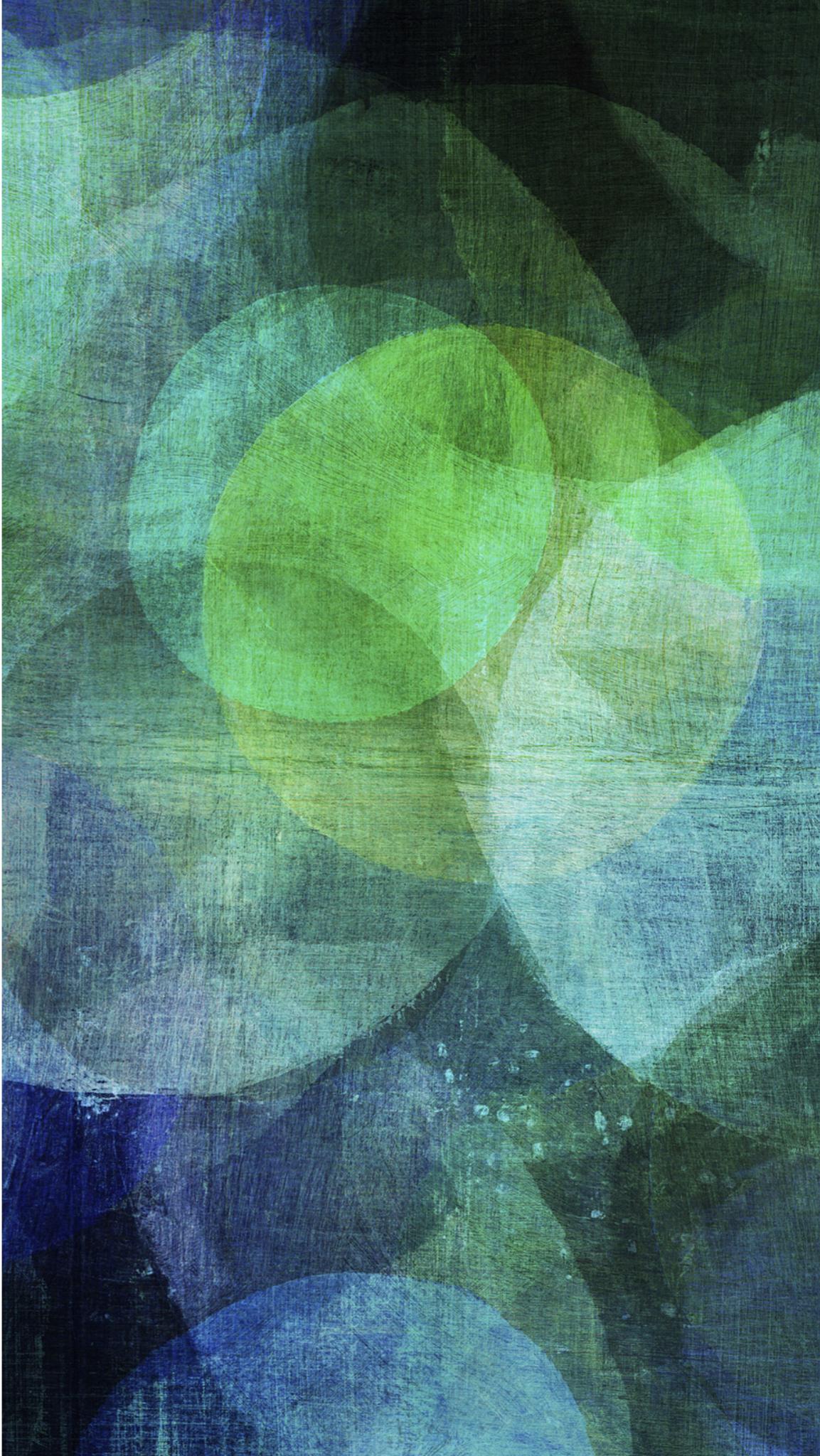
- Generates a headline from summarized sentence
- Uses linguistically motivated rules like:
 - Leftmost S with NP & VP
 - Removes low content nodes like determiners
- Utilizes Stanford parser and NLTK package



KEYWORD EXTRACTION

- Generates a headline based on keywords in summarized texts
- Creates a dependency tree of the sentence with main verb as the root
- Identifies subject and object keywords around the root
- Extracts NP using POS Tagging from subject and object keywords
- Generates combinations of subject-verb-object
- Utilizes NLTK, Stanford CoreNLP packages

EVALUATION



WEB INTERFACE

HeadlineGenerator

Paste your article here:

Larry Ellison, founder of Oracle Corporation and USC's 2016 commencement speaker, has donated \$200 million to the University in order to fund a cancer research center in West Los Angeles, the University announced on Wednesday.

The Lawrence J. Ellison Institute for Transformative Medicine of USC will be led by David Agus, a professor of engineering and medicine at USC and the current director of the Center for Applied Molecular Medicine and USC Westside Cancer Center.

"It is an honor and a privilege to team up with Larry Ellison in the fight against cancer," Agus told USC News. "Larry understands the need for transformation in cancer care. His gift will enable us to change our very approach on cancer research, treatment and prevention."

Enter the required number of summary lines:

2

Summarize using:

TextRank

LexRank

Generate Headline using:

HedgeTrimmer

KeywordExtraction

Headline:

Ellison's gift matches the largest single donation ever given to the school.

Summary:

This investment by Larry Ellison in USC is as inspirational as it is momentous, and it will serve as a dynamic force for change in how we approach cancer treatment and prevention, Ellison's gift matches the largest single donation ever given to the school.

Leave a comment:

Rate the aptness of headline generated:

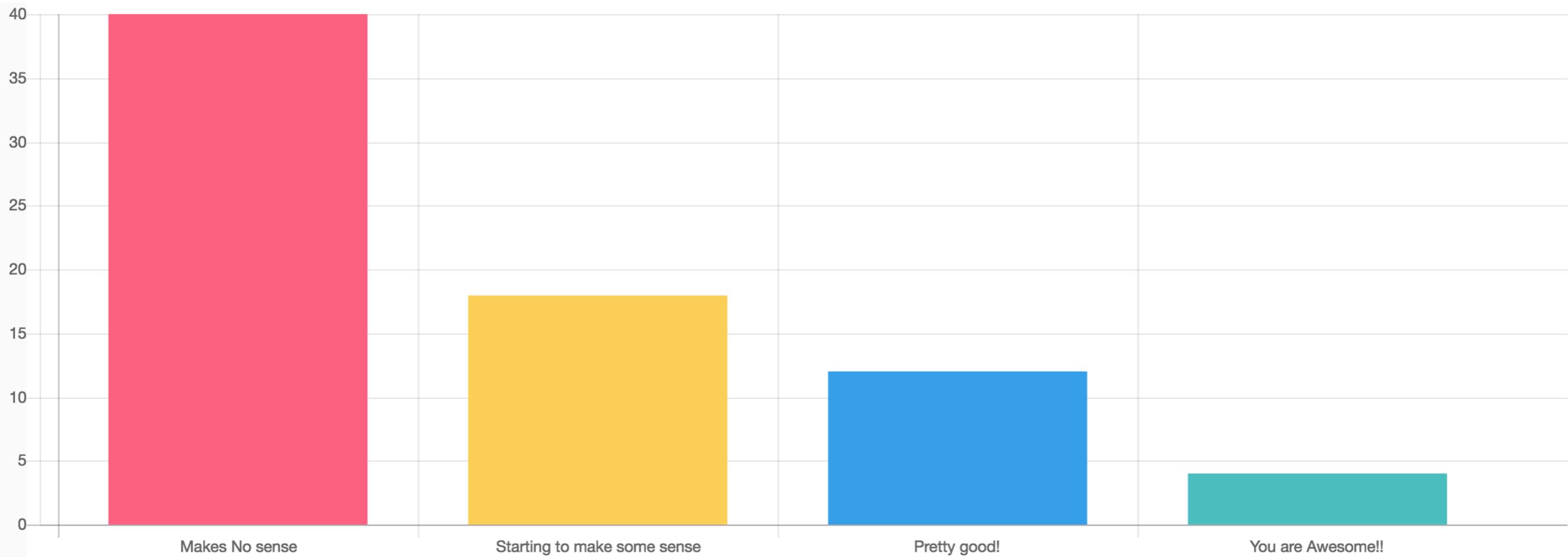
Makes no sense

Starting to make some sense

Pretty Good

You are awesome!

STATISTICS



THANK YOU

QUESTIONS?