NITC ASSISTANT

Aswin Saketh B150170CS
Eva Reshma Toppo B150129CS
Nahusha Das Chowdhury B150658CS
TGDK Sumanathilaka B150413CS

Department of Computer Science and Engineering
NIT Calicut

4 APRIL, 2019

Outline

Abstract

- Web Application which can guide any user in NITC to find answers related to academic and non-academic queries.
- This system will give answers related to NITC domain only in both format text and vocal.

Problem Statement

- Online Application which can guide any user to find answers related to any issues regarding NITC.
- This system will give most suitable answer to the query.
- Any issue which cannot answered by the system will be sent to admin, which will be answered by him and answer will be saved in data-set for further usage.

Architecture/Framework

1. Anaconda-Spyder with NLTK and other python Libraries.
2. Django Server
3. Html and CSS
4. Mysql (Database)
5. Gtts library for vocal generation

Brief Idea about the Dataset

Dataset

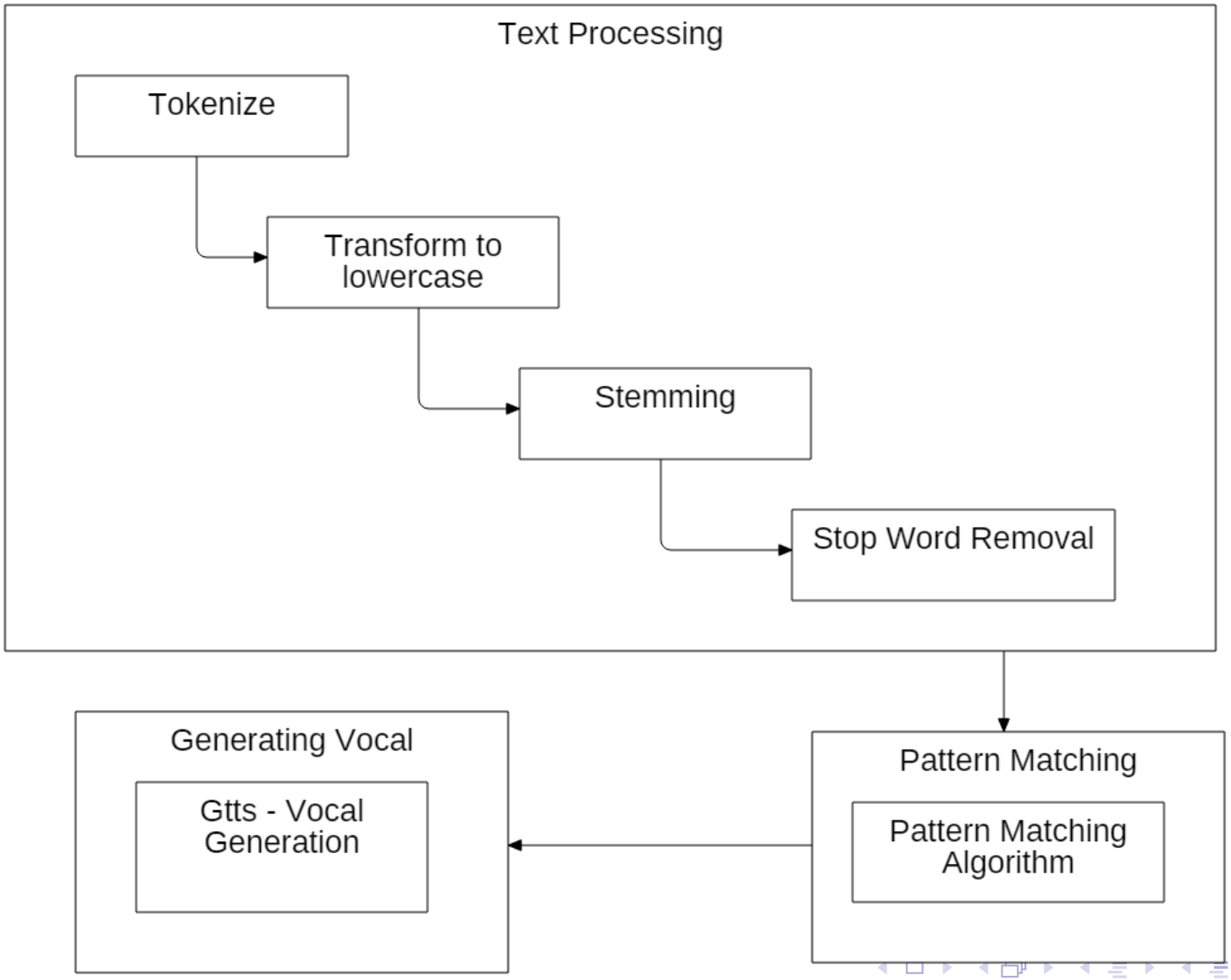
- No dataset to download from NITC website.
- Dataset is created for the pilot run. The dataset will be consisting of keywords related to some of the query and the answers. If a given query is unable to process, the system itself will send the query to the admin and the admin will answer the problem. The answer will be saved in dataset.
- As the system used by the end users increases, gradually the number of tuples in the dataset will also increase.
- Hence, the accuracy of the system for answering the problem will eventually increase.

Design of the System

- Text processing
  - Tokenize
  - Transform to lowercase
  - Stemming
  - Stop Word Removal
  - Non alphabetical word removal
- Pattern Matching
  - Pattern matching Algorithm
- Generating Vocal
  - Gtts - Vocal Generation

Design of the System

Flow Diagram



Result

OUTPUT

- Answering any academic or institute related queries in
  1. vocal
  2. text format

ACCURACY

- Accuracy increase as the number of tuples increases in the data-set

REFERENCE I

- Build your own Action for Google Assistant https://www.androidauthority.com/how-to-build-google-assistant-actions-877154/
- Three Efficient Ways to Supply Your App with a Virtual Assistant https://www.cleveroad.com/blog/how-to-create-virtual-assistant-apps-like-siri -and-google-assistant
- Machine Learning Text Processing https://towardsdatascience.com/machine-learning-text-processing-1d5a2d638958

REFERENCE II

- Bernhard Kratzwalda, Suzana Ilib, Mathias Krausa, Stefan Feuerriegela, Helmut Prendingerb, Deep learning for affective computing: Text-based emotion recognition in decision support

- Chen H, Sun M, Tu C, Lin Y, and Liu Z. Neural sentiment classification with user and product attention. In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2016), 2016.

Thank You