Xingbang Liu

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Academic Background

MS in Artificial Intelligence

Northwestern University | 2021.09 – 2023.01

BS in Computer Science

Allegheny College | 2016.08 – 2020.05

- GPA: 3.5
- Award: Cupper Scholar, Alden Scholar
- Related Courses: Algorithm Analysis, AI, Principles of Computer Organization, Data Analytics, Discrete Structures, Compiler Development, Programming Languages, Software Engineering, Operating Systems
- Minor: Psychology

Professional Skills

Language

Proficient: Python, Java, R, Latex
Familiar: C, MIPS, JavaScript

Tools

Proficient: Git, Pipenv, (Ba)sh, Linux
Familiar: Pytest, Docker, SQLAlchemy, OpenCV

Frameworks

Familiar: Flask
Know: Tensorflow, Pytorch, NLTK, Scikit-Learn

Work Experiences

Creative Technologist (Intern)

Chengdu AIUX Studio | 2019.05 – 2019.08

- Developed an interactive application, by using Python and Java, to visualize speeches and convert speech to plain text for further term frequency analysis.
- Trained an experimental conversational agent for design area, by using seq2seq project from GitHub.
- Deployed GitLab and Seafile to internal server; helped building a Sketch version control system by using Kactus.

Research Assistant

Allegheny College | 2018.05 – 2018.08

- Developed and enhanced an application to select information from interview records for MyMeadville organization.

Project Experiences

A Music Matching System Based on NLP   2020.02 – 2020.05

Project Background:
- The existing music recommendation system is limited because they rely mostly on user ratings and music fingerprint extraction. As a form of artistic work, music can fulfill people's emotional needs. However, people's music preferences could change based on their current emotion. Therefore, a new system was proposed to recommend music based on user's context information detected.

Project Implementation:
- A web application was built by using Python and Flask for users to input textual information regarding their current emotion. The application was deployed on AWS.
- Pytextrank was used to summarize and rank the contextual information; Monge Elkan algorithm was used to match the lyrics and summarized contextual information.
- The project was hosted on GitHub; Pipenv was used to manage the virtual environment and dependency; Pytest was used to test the program.

A Python NLP Application   2018.05 – 2018.08

Project Background:
- Mymeadville, a nonprofit organization for the city of Meadville, had to manually read and analyze a large amount of interview transcribes. An application was proposed to extract demanded information from public critics to increase the efficiency, and further help build a better town.

Project Implementation:
- The project was built by using Python, and it was hosted on GitHub.
- NLTK was used to pre-process the text, Pytextrank was used to extract higher ranking terms and sentences. Scikit-learn application was used to analyze the sentiment of the text.

Publication:
- AAAI proceedings(2019)
  "Intelligent Text Extraction and Summarization for an Improved Community Initiative."

Poster Presentation:
- 32nd International Artificial Intelligence Society Conference (2019)
  "Automated Text Summarization for the Enhancement of Public Services."

A Simple Music Recommendation System   2018.04 – 2018.05

- A final project for Algorithm Course by using Java.
- By using a simpler version of collaborative filtering to achieve Spotify DailyMix functionality.

The US Mass Shooting Data Analysis   2017.11 – 2017.12

- By using R to analyze data from Kaggle to visualize geological information, age information, mental health status information. We discussed the relationship between age, mental health status, and mass shooting happened in the US.