Iain Graham

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SKILLS

PROGRAMMING

Python | Advanced
Familiar with: Pandas, NumPy, Seaborn, Scikit learn, TensorFlow, PyTorch, keras, NLTK, Altair, Plotly, Jupyter

SQL | Proficient
R | Intermediate
Julia | Beginner

HARD SKILLS

Machine Learning
Experience with: Regression (linear, logistic, regularized), Classification, Clustering, Neural Nets & Deep Learning, Support Vector Machines, Decision Trees, Boosting

Natural Language Processing
Experience with: Word2Vec, Sentiment Analysis, Topic Modelling, Summarization, Language Modelling, TF-IDF

Data Visualization
Data Manipulation & Analysis
Databases
Debugging
Big Data
Data Collection & Cleaning

COURSEWORK

GRADUATE

Machine Learning
Natural Language Processing
Data Mining
Information Retrieval
Information Visualization
Data Manipulation & Analysis
Networks

EDUCATION

M.S. INFORMATION DATA SCIENCE

University of Michigan
Expected May 2021 | Ann Arbor, MI

B.S. ECONOMICS

University of South Carolina
May 2019 | Columbia, SC
Graduated Summa Cum Laude

PROJECTS

COVID-19 INFECTION DETECTION | Machine Learning

- Achieved accuracy of 81% correct classification leveraging machine learning to identify lungs infected with COVID-19 using images of CT scans of lungs by implementing neural nets and pre-trained nets
- Leveraged image augmentation to increase number of training samples from 707 to 2,121

VERTICAL SEARCH ENGINE | Information Retrieval | Test it out

- Built and deployed vertical search engine on spaceflight from scratch that achieves precision score of 25% and recall score of 70%
- Implemented 7 different term-weighting based ranking functions for document retrieval
- Collected over 2,000 relevant documents for search and deployed finished product using Flask and PythonAnywhere

TWITTER ECHO CHAMBERS NETWORK ANALYSIS | Networks

- Analyzed network evolution of more than 3,500 Twitter users engaged in political conversations during the 2020 U.S presidential election using measures of centrality
- Performed data manipulation and analysis to filter over 3M tweets to roughly 5,000 relevant tweets and label ideological preferences of users
- Determined presence of echo chambers in different time periods using community detection algorithms

SUMMARIZATION | Machine Learning & NLP | Medium post

- Coded and implemented 3 summarization methods to determine which approach generated the best summaries of news articles
- Used TensorFlow and pre-trained models to train the different models and evaluated them using readability and ROUGE metrics

For a more exhaustive list of projects visit my site here

EXPERIENCE

SAGENCE CONSULTING | Data Analyst

Oct 2020 - Nov 2020 | Remote

- Collected and cleaned total of over 50 pages of data for 2 of the clients company tear-downs
- Automated parts of data collection using Python and the Beautiful Soup web scraping package
- Updated 100+ pages of existing data with current information

UNIVERSITY OF MICHIGAN | Instructional Aide

Nov 2019 - Dec 2019 | Ann Arbor, MI

- Worked as a member of a 14-person teaching team and was responsible for grading over 200 assignments for a section of 25 students
- Bolstered communication, teamwork, and time management skills while meeting strict deadlines and helping other team members