

# Iain Graham

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## SKILLS

### PROGRAMMING & SOFTWARE

PYTHON | ADVANCED

Familiar with: Pandas, NumPy, Seaborn, Flask, Scikit learn, TensorFlow, PyTorch, keras, NLTK, Altair, Plotly, Jupyter, BS4

SQL | ADVANCED / PROFICIENT

TABLEAU | PROFICIENT

R | INTERMEDIATE

JULIA | BEGINNER

SPARK & HADOOP | BEGINNER

EXCEL & MICROSOFT OFFICE SUITE

### HARD SKILLS

MACHINE LEARNING

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

NATURAL LANGUAGE PROCESSING

Experience with: Word2Vec, Sentiment Analysis, Topic Modelling, Summarization, Language Modelling, TF-IDF, Regular Expressions

STATISTICS

DATA VISUALIZATION

DATA MANIPULATION & ANALYSIS

DATABASES

DATA COLLECTION & CLEANING

## COURSEWORK

### GRADUATE

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

## 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 86% correct classification identifying lungs infected with COVID-19 by implementing neural nets, conv. 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%
- 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 and community detection algorithms
- Performed data manipulation and analysis to filter over 3M tweets to roughly 5,000 relevant tweets and label ideological preferences of users

### SUMMARIZATION | MACHINE LEARNING & NLP | [MEDIUM POST](#)

- Coded and implemented 3 summarization methods to determine which approach generated the best summaries of news articles using TensorFlow and pre-trained networks
- Explored a new method of evaluation by considering readability scores in combination with the standard ROUGE score metric

FOR A MORE EXHAUSTIVE LIST OF PROJECTS & SKILLS VISIT [MY SITE HERE](#)

## EXPERIENCE

### SAGENCE CONSULTING | DATA ANALYST

Sep 2020 - Nov 2020 | Remote

- Collected a total of over 50 pages of data for 2 of the clients company tear-downs and updated 100+ pages of existing data with current information
- Automated parts of data collection using Python while sharpening my ability to prioritize competing tasks and growing my multi-tasking skills

### PRICELESS PRESERVATIONS | DATA CONSULTANT

Aug 2019 - Dec 2019 | Ann Arbor, MI

- Member of a 5 person team that made recommendations on how the business owners could turn their data
- Led 5 meetings with employees and key clients to collect information on business operations and transactions

### UNIVERSITY OF MICHIGAN | INSTRUCTIONAL AIDE

Aug 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