

TIMOTHY DOOLEY, PHD

DATA SCIENTIST

Experience

Metis

Data Scientist

Sept. 2020 to Dec. 2020

- Completed a 12 week fellowship in an accredited Data Science Program.
- Focused on Machine Learning, Statistical Analysis, Exploratory Data Analysis and Visualization, Deep Learning, and Databasing.
- Used state of the art machine modeling methods to provide actionable intelligence and tell stories with data scraped and collected.

Notre Dame School of Manhattan

Teacher and Facilitator for Mission

Aug. 2015 to Sept. 2020

- Facilitated discussion and lecture daily on Ethics, History, and Ontology.
- Planned and led student retreats throughout the year (budgeting, outreach, planning, travel and accommodation).
- Led Ignatian Mission Committee, organized meetings, edited reports, facilitated faculty discussions.

King's College London

PhD Researcher

London, England and Paris, France

Jan. 2012 to July 2017

- Quantitative and qualitative analysis of multilingual (Greek/Latin/French) syntactical, orthographical, and semantic variations of fourth and fifth century Biblical texts.
- Conducted Philological and Linguistic analysis with state of the art methods.

Projects

"I'll Bake What She's Having!", Using Computer Vision to Suggest Recipes Scraped from BonAppetit.com

- Built an application on a number of Convolutional Neural Networks to detect ingredients from user input pictures and suggest recipes from Natural Language Processing on scraped BA recipes.
- Modeled topics of recipes and grouped by similarity.
- Deployed a reverse image search model that takes a user image to suggest a similar recipe found on BA.

NLP and Polarized News

- Scraped ~16,000 election articles from Breitbart.com from March 2019-mid November 2020.
- Used sentiment scoring (transformers) and topic modeling (non-negative matrix factorization) to demonstrate fluctuating interests during the Presidential campaign.
- Created a text generator on a GPT-2 tuned Neural Net to create prototypical Breitbart election headlines (twitter.com/realBreitBot).

"What even is an IPA?", Beer Classification from user recipes on BrewersFriend.com

- Engineered a stacked Machine Learning Model (XGBoost, Random Forests, Logistic Regression, Naive Bayes) to group beers into categories with scraped user recipes from BrewersFriend.com.
- Developed three web apps using Streamlit to allow users to classify beer on hop content, quantifiable metrics (ABV, beer color), or with a written description.

"No Need to Roll the Dice", Using Regression to Predict Board Game Success

- Scraped 10,000 board game entry from the world's largest repository, BoardGameGeek.com
- Evaluated board game performance with Linear Regression on engineered and cleaned features to predict community reception and success.

Education

King's College, London

Jan. 2012 to July 2017

PhD Theology, Religious Studies (Text Criticism) 2017

Title: Jerome's text of the gospels, the 'Vetus Latina', and the 'Vulgate'.

Oxford University, Jesus College

Sept. 2011 to June 2012

Classics, Classical Philology and Linguistics, Post-Grad

Schreyer Honors College, Penn State

Aug. 2007 to June 2011

BA Classics 2011

High Honors, Phi Beta Kappa

Contact

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Skills

PROGRAMMING LANGUAGES

Python

SQL

JavaScript

HTML/CSS

SUPERVISED LEARNING

Linear Regression

Random Forest

XGBoost

SVMachines

Logistic Regression

k-Nearest Neighbors

UNSUPERVISED MACHINE LEARNING

Clustering (k-Means, Hier., DBSCAN)

Dimensionality Reduction (PCA, LDA, NMF)

Recommender Systems (Collaborative, Content, Hybrid)

NATURAL LANGUAGE PROCESSING

NLTK, spaCy, GPT-2

Transformers/Hugging Face

word2vec, gensim

NEURAL NETWORKS, DEEP LEARNING

Keras, Tensorflow, Pytorch

Computer Vision (OpenCV, PIL)

DATA EXPLORATION AND VISUALIZATION

Tableau

Matplotlib

Seaborn

Geopandas

Tensorboard

CLOUD/DISTRIBUTED COMPUTING

Google Cloud Platform & Colab

Hadoop, Spark

Dask

LANGUAGES

English: Native

French

Latin

Ancient Greek

WEB SCRAPING

BeautifulSoup

Selenium

urllib