

Aaron Mangum

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EXPERIENCE

DATA SCIENTIST, CONSULTANT 2015-PRESENT

- ➔ Created an interactive chart in D3 showing cause of death in the Syrian Civil War. <http://gifsandgraphs.com/Syrian-War-CoD/>

DATA SCIENTIST, METIS 2015

- ➔ Used MTA data to optimize deployment of a non-profit's street team.
- ➔ Scraped website data and used text mining in order to show the effect of violent media consumption on violent crime using linear regression. Created a script to help BeautifulSoup spider entire websites offline, negating the need to worry about an IP address being blocked for a DDoS attack.
- ➔ Calculated the contributing factors for heart disease using supervised machine learning classification. Wrote a program to brute-force analyze multiple models across differing hyper-parameters. Created a D3 visualization illustrating the accuracy of various models and features for predicting heart disease. <http://gifsandgraphs.com/Heart-Disease-D3/>
- ➔ Predicted the passage of federal legislation using natural language processing, logistic regression and clustering. Used unsupervised machine learning to train custom sentiment analysis.
- ➔ Used text processing and dimensionality reduction with gensim's word2vec to predict restaurant health code violations with Yelp data. Ensembled multiple models to increase accuracy. Model tested and performed well in a data science competition. <http://gifsandgraphs.com/Winning-Kaggle/>

JAPANESE TRIAL PREPARATION ATTORNEY, CONTRACT EMPLOYEE 2008-2014

Worked for various law firms, including Skadden Arps, Clifford Chance, Ropes & Gray, and Hogan Lovells. Worked on a variety of cases preparing Japanese written materials for antitrust litigation with the Department of Justice. Cases covered a broad range from medical patents to video game code.

TECHNOLOGY COORDINATOR, GW CENTER FOR THE STUDY OF GLOBALIZATION 2003-2004

Designed and wrote the interactive organization website. Created internal web-based applications in PHP, including a content management system for the research organization staff.

COMPUTER CONSULTANT, DOLSEY LTD 1999-2000

Designed and wrote the company website. Troubleshooted and rewrote company logistics software using an unknown programming language.

EDUCATION

SYRACUSE UNIVERSITY SCHOOL OF LAW; SYRACUSE, NY
THE GEORGE WASHINGTON UNIVERSITY; WASHINGTON, DC
KANSAI UNIVERSITY; OSAKA, JAPAN
THE GEORGE WASHINGTON UNIVERSITY; WASHINGTON, DC

SKILLS

COMPUTER

Python • pandas • numpy • scipy
scikit-learn • statsmodels • gensim
D3.js • matplotlib • NLTK • flask
BeautifulSoup • Selenium • mongoDB
SQL • C • Objective-C • ADA • PHP
Django • HTML • CSS • MapReduce
Hadoop • Hive • Spark • Git/Github
Bash • AWS

STATISTICS & MACHINE LEARNING

Hypothesis testing • Maximum
Likelihood Estimation • Bayesian
Inference • Linear Models • k-Nearest
Neighbors • Support Vector Machines
Random Forests • Decision Trees
Neural Networks • Naive Bayes
k-Means and other clustering algorithms
Topic Modeling

LANGUAGE

Japanese (Fluent)
Spanish and German (Basic)

JURIS DOCTOR (NYS BAR ADMITTED)
INTERNATIONAL ECONOMICS (BA)
JAPAN STUDIES
COMPUTER ENGINEERING (BS - PARTIAL)