

# Matthew Swogger

## Data Scientist

<https://github.com/matthewswogger>  
[matthewswogger.com](mailto:matthewswogger.com)  
910-273-8032  
[matthewswogger@gmail.com](mailto:matthewswogger@gmail.com)

## SUMMARY

Currently pursuing MS in data science. Recently completed an internship at TruSTAR; where I built an outlier detection algorithm, using Twitter's streaming API to detect new security threats.

## SKILLS

### Models

- Linear/Logistic Regression
- Recurrent Neural Nets
- A/B Testing
  - Frequentist
  - Bayesian
- SVM
- KNN
- Random Forest
- K-Means
- Hierarchical Clustering
- Naive Bayes
- PCA
- ARIMA

### Programming and Analysis

- Python
- R
- keras
- tensorflow
- numpy
- Tableau
- matplotlib
- seaborn
- SciPy
- Pandas
- Scikit-learn
- Pymongo

### Databases

- SQL
- MongoDB

### Scalable Data Technologies

- Spark

## EXPERIENCE

### Data Science Intern, TruSTAR

Oct. 2017 - Present

San Francisco, CA

Independently created, designed, and implemented an algorithm to detect new malware and ransomware security threats using Twitter's Streaming API. Coordinated with product, engineering and sales teams to attain targeted goal, resulting in a significant decrease in time to detection of new cybersecurity threats.

### Data Scientist, Music Firsthand

Feb. - Aug. 2017

Oakland, CA - Remote

Lead architect, working with CEO to compose and deploy machine learning algorithm to match bands and venues based on various similarities, resulting in the optimal pair.

### Machine Learning & Data Science Immersive, Galvanize

Apr. - Jul. 2016

San Francisco, CA

#### Projects

#### **Recurrent Neural Network Surge Forecaster**

- RNN with one LSTM hidden layer trained on 16 point multivariate time series dataset. Has an MSE of 0.029. [See my website and Github Repo](#)

#### **LinearSVM Breast Cancer Classification**

- Used SVM to classify measurements from digitized images of a fine needle aspirate (FNA) as Malignant or Benign. Precision: 0.97, Recall: 0.98, F-1 Score: 0.97 and a False Negative Rate of 1.03%. [See my Github Repo](#)

### US Army 82<sup>nd</sup> Airborne Division, Combat Engineer

Feb. 2003 - Dec. 2005

Fort Bragg, NC

- Deployed 9 months for Operation Iraqi Freedom and Operation Enduring Freedom
- Team leader: responsible for five soldiers' daily skill training, daily physical preparedness, and safety, allowing them to realize their full potential as Paratroopers

### All Outdoors, Raft Guide

May 2008 - Aug. 2012

Lotus, CA

- Managed groups of up to 100 customers as the Raft Trip Leader on Class 4 whitewater on the Middle and South Forks of the American River
- Other duties included Medical Officer, and Swift Water Rescue Officer

## EDUCATION

### M.S. Data Science

Aug. 2017 - Present

University of the Pacific, Stockton, CA

### B.S. Physics

Dec. 2013

University of Nevada, Reno, NV

### A.A. Outdoor Recreation Leadership

Dec. 2008

Feather River College, Quincy, CA

## ACTUARIAL EXAMS

Exam Financial Mathematics

Oct. 23 2014

Exam Probability and Statistics

May 14 2015