

# ERIN MCMAHON

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## education

- 2013 – Present **COLUMBIA UNIVERSITY** **NEW YORK, NY**  
Masters in Computer Sciences, May 2016  
Concentration in Machine Learning, GPA: 3.7  
Coursework: Deep Learning, Machine Learning, Bayesian Statistics, NLP, Data Visualization
- 2005 – 2009 **COLUMBIA UNIVERSITY** **NEW YORK, NY**  
Bachelors of Arts, May 2009  
Coursework: Calculus I-IV, Statistics, Environmental Engineering

## skills

Python, R, SQL, Linux, Java, Spark, AWS, Matlab, GIS, SPSS, Javascript:d3, Ruby  
GARCH & ARMA TS models, Bayesian statistics, advanced ML optimization, regularization

## experience

- Nov 2015 **FREELANCE DATA SCIENTIST** **NEW YORK, NY**  
*Biomaps* – Created Gaussian Mixture Models from sensor data (frequency of 1s) to cluster athletic training regimes  
*Robinson Global Strategies* – Achieved 96% accuracy on up/down financial model using ensemble boosting models (baseline: 63%)  
*WellWatch* – Predicted asthma outcomes from individual-level and environmental factors pulled from public APIs using a time-lagged logit model  
*RetSKU* – Used Natural Language Processing to predict sentiment of specific product characteristics (price, functionality, etc.) of 71K product reviews from US retail sites
- 2010 – 2014 **CORPORATE EXECUTIVE BOARD** **WASHINGTON DC**  
*Senior Quantitative Analyst*  
Designed and enabled GIS maps of potential ‘hotspots’ for branch activity from splines of deposits from bank branches and overlaid Census Tract-level income data  
Created economic forecasts for global noncash transaction volumes through 2015 using ARMA time-series models  
Used Item Response Theory (IRT) to develop Wealth Management loyalty drivers

## research / publications

- 2016 **COLUMBIA UNIVERSITY** **NEW YORK, NY**  
Used concurrent neural nets (CNN) from images of Amazon boots with Multi-Armed Bandits algorithm to create a real-time recommendation engine
- 2009 **NASA GODDARD SPACE CENTER** **GREENBELT, MD**  
J. Acker, E. McMahon, S. Shen, G. Leptoukh. “Time-Series Analysis of Remotely-Sensed SeaWiFS Chlorophyll in River-Influenced Coastal Regions” EARSel eProceedings, 2009.

## honors

Audible 2016 Hackathon Finalist, 2015 Abu Dhabi (NYUAD) Hackathon for Social Good, Womensphere Conference Scholarship (2014), Earth Institute Travel Grant (2009), Columbia Financial Grant (2009), Sustainable Engineering Grant (2008), Dean’s List