

Brian Griner, PhD

Research & Applied Scientist

Statistical, Machine & Deep Learning

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GitHub: www.github.com/briangriner

Blog: briangriner.github.io

SKILLS

Tools: Python, Scikit-learn, Scikit-image, Keras, NLTK, Gensim, R, SparkR, SQL, SAS, Unix/Linux cmd line, Bash script, Regex

ML, DL & SL frameworks:

Classification & Regression, Ensemble Learning, Sparsity Modeling, Feature Engineering, Forecasting-ARIMA & LSTM, Sentiment Analysis, Topic Modeling, Document Classification /

EDUCATION

University of Pittsburgh, Graduate School Public & Intl. Affairs

PhD Public Policy Research Methods

Specialized in Advanced Policy Research Methodologies: Benefit/Cost Analysis, Econometrics, Micro, Math Econ, Math Stat & Multivariate Statistics.

Dissertation of the year award

MPA Public Administration

West Chester University

BA Communications

Forensics Team - Extemporaneous speaking competitions

Finnegan Foundation Award for essay on state gov't. policy and Finnegan internship at the Pennsylvania state capital

EXPERIENCE

Assembly (Feb 2018-May 2018) - Director, Analytics for big pharma account team

Helped the account team understand new Rx data sources, pharma business model and presentation style for senior leadership deliverables.

Worked with Dev Ops team on automating ingestion of new Rx data sources into AWS Redshift database platform connected to a Tableau server.

Data Science & Learning Systems, LLC (June 2017 - present) - Founder. Mission to transform commercial analytics by leveraging new data sources (e.g., images and text) and ML, DL and SL algorithms. Examples include:

Ensemble learning for augmentation of biometric data in pre-diabetes prediction and high risk subgroup analysis.

Partial dependence plots for Machine Learning algorithms to identify constellations of symptoms (i.e., risk cascades) that exponentially increase the risk of diabetes onset.

Long Short-Term Memory networks for sales forecasting time series of retail sales of a consumer package good.

Digital Display Ad Model: Predictive model of Ad clicks from log files using sparse SVD, NMF to extract features from user-site interactions.

Boehringer Ingelheim (Jan 2016 - May 2017) - Director, Data Strategy & Innovation

Rx influencer modeling using open source physician referral data.

Rx promotion-response modeling for rep email campaigns using Rx and promotional data.

Sentiment analysis and topic modeling of inbound call center data.

Quintiles (2012 - 2015) - Chief Methodologist

Patient-based line of therapy physician treatment choice model and market share simulator using the GE EMR data in OAC market.

Bayesian network to simulate healthcare buying process in immunology using pharmacy, medical and hospital claims data.

Kantar Health, TargetRx, ORC, Lightspeed Research, Viacom

Talks, Publications, Conference Proceedings & Presentations

Decoding Health with Data Science and Machine Learning: Examining Risk Factors Associated with Early Onset Type 2 Diabetes Among Pima Indian Women. <https://briangriner.github.io/decoding-health-risk-factors-pre-diabetes-ML-2.19.18.html>

Using Partial Dependence Plots in ML to Measure Feature Importance
https://briangriner.github.io/Partial_Dependence_Plots_presentation-BrianGriner-PrincetonPublicLibrary-4.14.18-updated-4.22.18.html

Tuning the Beast: Review of LSTM Tuning Methods for Forecasting Time Series
https://briangriner.github.io/Tuning_the_Beast-TimeSeriesForecasting_using_LSTMs.html

Practical Machine Learning that Scales: Using H2O with Python to Accelerate ML and DL
https://github.com/briangriner/notebooks/blob/master/Practical_ML_Scale_H2O_presentation-BrianGriner-NYC_Big_Data_Science-6.5.18-updated-6.7.18-FINAL.ipynb

ICAAC/ICC 2015 - 55th Interscience Conference on Antimicrobial Agents and Chemotherapy Poster: [Inconsistency in Defining Profound and Prolonged Neutropenia for Antifungal Prophylaxis Decisions](#) **A. H. Sung**¹, T. Rhodes¹, J. Arduino¹, S. W. Marcella¹, R. Stolper², M. Meyer², D. Kombe², B. Griner²; ¹Merck & Co., Inc., Kenilworth, NJ, ²Quintiles, Durham, NC

2015 Value in Health abstract: [Comparison of Machine Learning, Statistical and Hybrid Methods to Identify Predictors of Positive Treatment Outcomes in Comorbid Conditions Using EMR Data](#) I. Lipkovich, B.P. Griner, J. Niemira, C. Jin, Value in Health 05/2015; 18(3):A101-A102. DOI:10.1016/j.jval.2015.03.594

Reviewer, **2015 ISPOR 20th International Annual Meeting**, Philadelphia, PA.

2014 ISPOR 17th Annual European Congress Posters:

- 1) *Prevalence-Based Measure of the Economic Burden of Rare Diseases: Case Review to Determine the Annual Cost of Acromegaly in France.* [https://www.valueinhealthjournal.com/article/S1098-3015\(14\)03596-7/fulltext](https://www.valueinhealthjournal.com/article/S1098-3015(14)03596-7/fulltext)
- 2) *Prevalence-Based Measure of the Economic Burden of Rare Diseases: Case Review to Determine the Annual Cost of Acromegaly in Italy.* [https://www.valueinhealthjournal.com/article/S1098-3015\(14\)03598-0/fulltext](https://www.valueinhealthjournal.com/article/S1098-3015(14)03598-0/fulltext)

Reviewer, **ISPOR Conjoint Analysis: Statistical Analyses - Good Research Practices Task Force** <https://www.ispor.org/Conjoint-Analysis-Statistical-Methods-Guidelines.pdf>

June 2014 Life Science Leader article: *Navigating the New World of Value-Based Healthcare* <http://lifescienceleadermag.epubxp.com/issue/320415/51>

2014 Pharma Market Research Conference presentation: *Using Bayesian Networks: Unified Physician-Patient Segmentation, Targeting and Positioning of New Products*

2013 Pharmaceutical Market Research Group National Annual Conference:

Navigating the New World of Value-Based Healthcare: A Quantitative Approach to Modeling Value Drivers to Simulate Global Market Access, Reimbursement and Pricing for New Therapies

2013 Quintiles white paper: *Navigating the New World of Value-Based*

Healthcare: Global Trends and Regulatory Reforms That Will Shape the Future of Healthcare

2012 November - December PharmaVoice article: *2013: Year in Preview,*

Marketing experts identify trends that will have the most impact on the marketing landscape in the next five years

2012 Sawtooth software presentation and conference proceedings: *Leveraging*

the Upper Level Models in HB for Integrated Modeling of Multiple Stakeholders and Decision Processes in Complex Market Environments

2010 PBIRG University Annual General Meeting presentation: *Using Primary*

Patient Level Data to Bring Market Opportunity Assessments to Life

2009 American Marketing Association Advanced Research Techniques Forum

presentation: *A Dynamic Framework for Modeling Multistakeholder Interaction - A Pharmaceutical Case Study*

2008 Pharmaceutical Marketing Research Group Institute presentation:

Building a Framework that Embraces the Interdependence between Physicians, Nurses and Patient Therapy Decisions

2007 Pharmaceutical Marketing Research Group Institute: *Stairway to ...*

Stickiness! How Benefits Laddering and Message Optimization Help Build a Product Story

Dissertation related publications:

Stephen Farber, Brian Griner: *Valuing watershed quality improvements using conjoint analysis*. Ecological Economics 07/2000; 34(1-34):63-76. DOI:10.1016/S0921-8009(00)00153-1

Stephen Farber, Brian Griner: *Using Conjoint Analysis To Value Ecosystem Change†*. Environmental Science and Technology 03/2000; 34(8). DOI:10.1021/es990727r

Brian Griner, Stephen Farber: *A Conjoint Analysis of Water Quality Enhancements and Degradations in a Western Pennsylvania Watershed*. 06/1996; Watersheds '96 Conference Proceedings: pp 635-638.