BRIAN GRINER, PhD
briangriner@dslsllc.com
+1 609.418.1644
https://linkedin.com/in/briangriner
https://github.com/briangriner

SUMMARY

A highly motivated, analytics and insights consultant with a track-record of successful engagements. Adept at designing and scoping analytic projects to align with client needs and budget. Industry agnostic, but possesses strong pharmaceutical industry experience.

Expertise:

- Data Science and Prescriptive analytics.
- Simulation (i.e. "what if" scenario modeling).
- Forecasting using primary and secondary data sources.
- Market Research: Choice-based conjoint analysis, Patient chart pulls, Segmentation, Attitudinal database scoring.
- Machine Learning and Statistical Learning.
- Data engineering.
- Project design and management.

SKILLS

Management

- Able to manage internal and external clients, direct reports, and client projects on high profile, cross-functional projects.
- Translate business questions into focused analytic workstreams that include: research design, data integration, appropriate analytic methods to produce high value, executive insights to support key business decisions and planning.
- Leverage advanced analytic methods from statistics, machine learning and AI to deliver clear, actionable analytic insights and business recommendations for business leaders.
- Develop advanced analytics teams that can work with internal and external business partners.

Analytics

- Multidisciplinary approach to analytics drawing from Multivariate and Bayesian Statistics, Econometrics and Statistical Learning (See experience for recent projects).

Data Engineering

- **Cloud computing:** Experience working on aws, Azure, GCP cloud platforms using Linux servers as well as Windows Server environments on Azure.
- **Programming languages:** Python, Unix/Linux command line, SQL (for creating views and derived metrics for analytic datasets and dashboards) Snowflake, Redshift, Spark using SQL context and PySpark. Primary IDEs are PySpark and Vim.
- **Interactive dashboards** for predictive models in Power BI, e.g. Immuno-oncology online dashboard in Power BI using Python to deploy models of Overall Survival. By using the Power BI data model, end users can filter data to create custom subgroups for comparison then run the fitted model in Python on those groups dynamically.

Teaching

- **Learning Lab at Data Science & Learning Systems**: Developed a series of 5 online workshops designed to help students learn the core python libraries used for machine learning in the Python ecosystem: Python language, Numpy, Pandas, Matplotlib, Scikit-learn and TensorFlow libraries. Workshop textbook: **Geron A. Hands-On Machine Learning with Scikit-Learn, Keras & TensorFlow: Concepts, Tools and Techniques to Build Intelligent Systems. 2nd ed. Sebastopol (CA): O'Reilly; 2019** (click on **link** to see Jupyter notebooks used in workshop).

EDUCATION

UNIVERSITY OF PITTSBURGH, GRADUATE SCHOOL PUBLIC & INTL. AFFAIRS - Pittsburgh, PA
PhD Public Policy Research Methods - Doctoral Program Award (Academic Excellence in Dissertation Research)
MPA Public Administration - Thesis: Evaluation of Alternative Methods for Forecasting Regional Industry Employment
WEST CHESTER UNIVERSITY - West Chester, PA
BA Communications - Magna Cum Laude
RUTGERS UNIVERSITY - New Brunswick, NJ
Certification: Oracle SQL and PL/SQL + Python Developer + Java Programmer (5 month program)

AWARDS

IPSOS NEW PRODUCT INNOVATION AWARD - 2001 Florence, Italy for customer satisfaction (CS) management system for inbound call center for automated reporting and manager email alerts for dissatisfied, high-value customers.

PROFESSIONAL EXPERIENCE

DATA SCIENCE & LEARNING SYSTEMS, LLC - Principal **June 2017 to present**

Create new business insights from multiple data sources using econometric, time-series, statistical learning and machine learning models. Professional experience includes projects in waste management, life sciences, commercial pharmaceutical marketing and sales, financial services, technology, media and environmental non-profit sectors. Recent engagements include:

RUTGERS UNIVERSITY - Consultant **July 2024 to present**

- Created online survey for Sentence Order Frequency test using Google Forms with custom HTML and CSS.
- Provided guidance and statistical support for research paper on statistical bias in linear mixed models when when outcome of interest is counts (e.g. number of successes). Goal of research is to provide guidelines and best practices for analyzing count data with mixed models.

WASTE MANAGEMENT - Consultant **January 2023 to June 2024**

- Member of the Financial Analytics team responsible for reviewing, updating and maintaining Python middleware codebase created by OneStream implementation partner Deloitte Consulting.
- Updated codebase with fixes and model refinements that reduced volumetric forecasting error by millions per year.

EVERSANA - Consultant **November 2021 to May 2022**

- Supported Eversana commercial team on launch of MedRhythms innovative medical device using music therapy and wearable sensors to treat patients with post stroke residual gate impairment.
- Helped to develop and refine targeting list of physicians and physical therapists by using machine learning to project physician segments on to the full target list of physicians.

BAYER PHARMACEUTICALS - Consultant **December 2019 to mid-February 2020**

- Supported Commercial Data Management team to organize and complete data documentation across Bayer's pharmaceutical product franchises, e.g., diabetes, CKD, Oncology, hematology.
- Data types included: administrative claims, specialty pharmacy and distributor data, customer data master.
- Created SQL queries/views to help data analysts extract the most current data from Bayer's data warehouse for individual products. Using the queries helped analysts reduce error by ensuring data used was current and complete.

BOEHRINGER INGELHEIM – Sr. Assoc. Director, Data Strategy & Innovation **January 2016 to May 2017**

Example projects include:

- **Speaker Bureau Rx Impact Analysis:** Measure ROI of speaker bureau program using data on physician attendance to event, speaker profile and monthly change in physician prescribing by attendees. After controlling for other factors that influence physician prescribing, the speaker bureau program did not show a positive ROI. Further investigation showed that few prescribing physicians were actually attending these events but instead sending non-prescribing medical professionals from the physician's office.
- **Outbound Telemarketing Campaign Effectiveness:** Measure ROI of outbound rep telemarketing campaign to physicians to counter a loss of formulary coverage by a large insurance plan. The analysis showed that the campaign had a significant impact on reducing the rate physicians switched existing patients to the covered alternative medication resulting in a positive ROI.
- **Physician Rx Network Influencer Model:** Network Influencer Model of cardiovascular and diabetes specialists for personal promotion using CMS physician to physician aggregated patient referral data, physician specialty and prescribing behavior. Network Influencer Model predicted specialists with the greatest ROI potential for personal promotion. Specialists with high Network Influencer scores were associated with 2 to 2.5 times more prescriptions than average.
- **Rep-Approved Email Promotion-Response Model:** Promotion-response model to measure the impact of rep-approved email campaigns by measuring changes in weekly physician NRx in response to rep approved emails, personal promotion (details and samples) and email content (type of message, e.g. 'formulary win', 'sorry I missed you', 'schedule appointment'), email frequency and rep characteristics. Model results provided physician-level guidance on: optimal frequency, timing and content of rep approved emails.
- **Diabetes Franchise Provider Access Analysis:** Created a short list of hospitals with potential formulary barriers using physician – provider associations and monthly physician Rx data by product. Analysis compared physician prescribing by therapy within each hospital to identify hospitals where physician prescribing is lower than average. Marketing team used short list for futher follow up.

QUINTILES (now IQVIA) – Chief Methodologist, Advisory Services **November 2012 to April 2015**

Member of team that worked across the company to help sell and deliver large projects that integrated services from different areas of the company. Example projects include:

- **Bayesian Network Patient Journey Simulator:** Bayesian Network patient treatment flow model created with EMR data and deployed via cloud application in an online "what-if" market scenario simulator. By using the simulator, the client was able to determine that a key reason for low market share was physician management of side effects. Rather than titrating to a lower dose per the product label, physician switched medications. The counterfactual prediction from the Bayesian network showed that patients of physicians who titrated from the lower to higher doses had three times longer duration of therapy than patients of physicians who didn't. Insights generated from the model's prediction allowed the client to quantify the potential benefit from increasing the percentage of physicians managing side effects through titration to compare to the cost of different marketing strategies, i.e. nurse educators, medical science liaisons.

- **Real World Data Market Share Tool:** Created a product share tool to predict new product adoption by line of therapy using EMR data. Predicted results were aggregated by geographic area and weighted by prescription volume. Dashboard updated as new EMR data loaded into database view. Dashboard showed relationship between market share and patient prevalence by geography.
- **Real World Data Analysis for R&D**: Analyzed ten comorbidities associated with MS patients on a particular treatment using EMR data. Analysis used by Research and Development to identify possible new indications in different disease areas.
- **Provider Evidence-Based Order Set Impact Analysis:** Comparison of adherence to treatment and survival for oncology patients in a regional hospital system. Analysis showed a directional improvement in adherence to therapy but lacked statistical significance as a large proportion of order sets were overridden by physicians.
- **Market Research and Physician Rx Sales Force Effectiveness Model:** Market research surveys and prescription data merged to create a model of sales and support service quality in the respiratory market. Model predicted incremental Rx share for an increase in perceived quality of the client's field reps and support services relative to competitors. Sales operations used this model to prioritize training areas with the most impact on growing market share.
- **Linked Price - Market Access Simulator:** Simulator combined market research data from qualitative interviews with medical directors and survey data from quantitative conjoint trade-off exercise by physicians in a hierarchical Bayes (HB) random effects model to create a robust quantitative pricing tool that predicted market access levels at different price points. Client used simulator to inform contract negotiations for a new products in HIV, HCV, Oncology markets.
- **Patient Reported Outcomes (PRO) Patient Engagement Model:** Validated PRO measures used in structural equation model to measure association between levels of patient engagement and outcomes in respiratory therapies. Model showed significantly improved outcomes for increased levels of patient engagement across several therapeutic areas.

SAMPLE OF POSTS, PRESENTATIONS, POSTERS & PUBLICATIONS

American Statistical Association Biopharmaceutical Section Regulatory-Industry Workshop. PS40-Supervised Machine Learning to Identify Social Behavioral Health Care Risks for COVID-19—Related Mortality and Inform Targets for Treatment and Prevention

2018 Future Pharma Commercial Data Insights Conference: **Practical Applications for Building A Commercial Center of Excellence: Digital Analytics Case Study**

ICAAC/ICC 2015 – 55th Interscience Conference on Antimicrobial Agents and Chemotherapy: **Inconsistency in Defining Profound and Prolonged Neutropenia for Antifungal Prophylaxis Decisions**. A. H. Sung [1], T. Rhodes [1], J. Arduino [1], S. W. Marcella [1], R. Stolper [2], M. Meyer [2], D. Kombe [2], B. Griner [2]; 1. Merck & Co., Inc., Kenilworth, NJ, 2. Quintiles, Durham, NC

June 2014 Life Science Leader: **Navigating the New World of Value-Based Healthcare**

2014 Pharma Market Research Conference: 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: 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 Conference and 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: Using Primary Patient Level Data to Bring Market Opportunity Assessments to Life

2009 American Marketing Association Advanced Research Techniques Forum: A Dynamic Framework for Modeling Multistakeholder Interaction – A Pharmaceutical Case Study

2008 Pharmaceutical Marketing Research Group Institute: 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.