NANA BOATENG

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SUMMARY

- Mr. Nana Boateng is a Data Scientist with professional experience in machine learning, natural language processing, optimization techniques, predictive analytics, statistical analysis and spatial data visualization.
- Led multiple analytical projects using Customer Usage Data (CUDA) and warranty data to drive insights into customer mileage, identify warranty concerns and improve overall durability of FCA vehicles using R, Python, MATLAB, Tableau and SAS.
- Developed Qlikview interface to various FCA vehicle databases and participated in weekly meetings to analyze various stages of the development Qlikview.
- Responsible for data management that includes data collection and database management.
- Performed statistical analysis using models such as conditional fixed effects logistic regression for binary categorical outcomes.

TECHNICAL SKILLS

- C++
- Hadoop/ MapReduce /Spark
- MATLAB
- Minitab
- Python
- QlikView
- R
- SAS
- Spark
- SPSS
- SQL
- Stata
- Tableau
- Visual Basic

Portfolio
- http://restanalytics.com/
- https://github.com/NanaAkwasiAbayieBoateng
- https://rpubs.com/mr148

TRAINING AND CERTIFICATIONS

- Certified Base Programmer - SAS
- American Statistical Association
- American Economic Association
- Institute of Commercial Managers (UK)
- International Conference on Design of Experiments, University of Memphis

PROFESSIONAL EXPERIENCE

Fiat Chrysler Automobiles, MI
Data Scientist
June 2017 - Present

- Lead manpower requirements project to predict with better accuracy the number of vehicles that would be sent to Chrysler Proving Grounds for vehicle testing. This allowed the manpower team to hire the right number of drivers thereby reducing cost otherwise incurred from hiring more drivers than will be needed.
- Sentiment Analysis of FCA employee and ex-employee reviews: Scraped and analyzed thousands of employee and ex-employees reviews from Glassdoor and Indeed between 2008 and 2018.

- Lead on multiple analytical projects using Customer Usage Data (CUDA) and warranty data to drive insights into customer mileage, identify warranty concerns and improve overall durability of FCA vehicles.
- Lead Trailer Tow project using data from Control Tec database to analyze 95th Percentile trailer towing FCA SUV vehicles.
- Member of team developing Qlikview interface to various FCA vehicle databases Participated in weekly meetings to analyze various stages of the development Qlikview.

Environment: R, Python, MATLAB, Tableau, SAS, SQL, Qlikview

Baptist Cancer Center, TN
Data Analyst / Manager
January 2016 - May 2017(Concurrent with Jobs Below)

- Responsible for data management that includes data collection and database management for the Thoracic Oncology Multidisciplinary Clinic.
- Duties include collecting data at conferences and during clinics and reporting to Medical Director, Medical Steering Committee, Administration and various grant-funding organizations as directed.
- Perform a prospective matched cohort comparative effectiveness study of patients receiving serial versus multidisciplinary care, with key patient-centered endpoints (survival, satisfaction with the care experience, timeliness and appropriateness of care, quality of staging).
- Perform statistical analysis to determine the quality of care and survival between multidisciplinary program and serial care program using models such as conditional fixed effects logistic regression for binary categorical outcomes; fixed effects generalized linear models and fixed effects proportional hazard model for survival analysis.

Baptist College of Health Sciences, TN
Adjunct Instructor
August 2015 - August 2016 (Concurrent with Job Below)

- Taught College Algebra and Introduction to Statistics.

The University of Memphis, TN
Graduate Assistant
August 2012 - August 2016 (Concurrent with Job Above)

Member of Professional Development Committee, January 2014 - August 2016
- Recruited resource personnel for graduate student professional development seminars.
- Organized professional development seminars.

Member of Graduate Assistants Healthcare Committee, January 2014 - August 2016

- Partnered with Church Health Center to bring health insurance coverage to Graduate Assistants.

Graduate Teaching Assistant, August 2012 - May 2016
- Taught Introduction to Statistics, Foundations of Math, and Elementary Calculus.

St. Jude Children's Research Hospital, TN
Graduate Research Assistant
July 2014 - June 2015 (Concurrent with Jobs Above)

- Worked on numerous research projects, including:.
- (1) gastronomy complications in pediatric cancer patients;.
- (2) the effect of dynamic contrast: enhanced MRI(DEMRI) on tumor angiogenic activity and in predicting tumor response of OS2008 patients;.
- (3) evaluation of alternative in vivo screening methodology:.
- (4) analysis of single mouse tumor response results from PPTP; and (5) the significance of splenomegaly at diagnosis in pediatric Hodgkin lymphoma.

Middle Tennessee State University, TN
Graduate Teaching Assistant
August 2010 - August 2012

- Taught College Algebra.
- Tutored Calculus I, II &III, Partial and Ordinary Differential Equations, Financial Mathematics and Trigonometry.

Presbyterian Girls Senior High School, Ghana
Mathematics Instructor
August 2008 - August 2010

- Taught various sections of high school level Mathematics and Physics.

Publications

- Fernandez Israel, John A. Sandoval, Reagan M. Jones, Nana Boateng, Jianrong Wu, Bhaskar N. Rao,. Andrew M. Davidoff, Stephen A. Stochat. Gastrostomy Complications in Pediatric Cancer Patients: A Retrospective Single-Institution Review, Pediatric Blood & Cancer 62(7):S184-S185, November 2015.

- Nana Boateng, Numerical Partial Differential Solution of The Black-Scholes Equation, Lambert Academic.Publishing (2013).

- Brendan Murphy, Han Yin, John Maris, E Kolb, Richard Gorlick, C. Patrick Reynolds, Min Kang, Stephen Keir, Raushan Kurmasheva, Igor Dvorchik, Jianrong Wu, Catherine Billups, Nana Boateng, Malcolm Smith, and Peter Houghton. Evaluation of Alternative In Vivo Drug Screening Methodology: single mouse analysis: A Retrospective Single-Institution Review, Cancer Research, October 2016.

Research Experience

- Bayesian Inference (A/B Testing).
- Multi level/Hierarchical Modeling.
- Predictive Analytics/Time Series Modeling.
- Survival Analysis.
- Supervised and Unsupervised learning, Clustering Algorithms, Dimensionality Reduction.
- Machine learning (deep learning, recommender systems, natural language processing, network analysis).
- Non-parametric Regression and Methods.
- Diagnostic Imaging and Sensitivity Analysis.
- Computational Modeling and Biostatistics in Gene Expression Data.
- Sentiment Analysis (structured and unstructured data sets).
- Sample Size Estimation and Power Analysis.
- Analysis of Count Data.
- H2O(in R and Python).
- Spark/ SparkR / Sparklyr / R in Hadoop/ PySpark / MapReduce.
- Optimization techniques (linear / nonlinear programming, dynamic / stochastic programming).
- Quantitative finance (Monte Carlo simulation, risk quantification, portfolio optimization, economic scenario generation).
- Parallel, GPU and Cloud computing.
- Spatial Data Visualization.

EDUCATION

- PhD, Mathematics (Statistics Concentration, 2016), The University of Memphis, Memphis, TN
- Master of Arts in Economics (2016), The University of Memphis, Memphis, TN
- Master of Science in Mathematics (Statistics Concentration, 2014), The University of Memphis, Memphis, TN
- Master of Science in Mathematics (2012), Middle Tennessee State University, Murfreesboro, TN
- Graduate Diploma in Business Studies (2010), Institute of Commercial Managers, United Kingdom
- Bachelor of Science in Mathematics (2007), Kwame Nkrumah University of Science and Technology, Kumasi-Ghana