BRANDON I. KING

Ph.D. Degree from North Carolina State University | Data Science & Textiles

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github.com/bking2415 bking2415.github.io/portfolio

RESEARCH & DATA SCIENCE EXPERIENCE

Data Scientist Intern | **Naval Information Warfare Center (NIWC)**

May 2019 —- August 2019 Charleston, SC

- Collaborated with cross-functional teams on research projects: applied data pre-processing and machine learning concepts *(Term Frequency–Inverse Document Frequency and K-Means Clustering)* to build on existing systems infrastructure
- Used *Term Frequency–Inverse Document Frequency* and *K-Means Clustering* with *Java* and *Clojure* resulting in backend methods to perform 99% faster
- Communicated analysis from K-Means Clustering algorithm with leadership within the Business Enterprise and Data Analytics department to recommend the best approach to cluster documents

Graduate Research Assistant | **North Carolina State University**

August 2016 — October 2021 Raleigh, NC

- Analyzed Big Data and constructed simulation models to improve healthcare processes by decreasing response time to cardiac events by an average of 45.2 seconds for efficient cardiac monitoring configurations
- Used *Python* to design and implement quantitative analysis, supervised learning methods, in-depth data exploration, and feature engineering on multi-dimensional data sets to extract insights on textile recycling behavior with 92% accuracy
- Utilized *Factor Analysis* and *PCA* for feature reduction and *K-Means Clustering* algorithm with *Python* to identify similarities between survey participants based on textile purchasing decisions and textile recycling motivations
- Compared and evaluated supervised learning models *(Step-wise Regression, Neural Networks, and Random Forest Trees)* with *Python* to predict a multi-regression output with accuracy, and improve textile manufacturing processes performance

ENTREPRENEURIAL EXPERIENCE

Owner & Lead Tutor | **Beacon of Light Tutoring**

August 2015 — Present Triangle Area, NC

- Passionately serve as a mentor, tutor, and advisor for an average of three local middle school and high school students per year who are interested in excelling in Mathematics
- Lead one-on-one sessions for students across all grade levels with their mathematics assignments
- Receive 100% positive feedback from tutees and currently have a 100% success and graduation rate

PRESENTATIONS

King, B.I., Rothenberg, L., Joines, J. *Applying Machine Learning Methods for Insight into Textile Recycling Behavior.* Presented at: 2021 Joint Statistical Meeting; August 2021.

TECHNICAL PROJECTS

Beat the Bookie | *github.com/bking2415/Decision-Tree* | Graduate Certificate Presentation

- Implemented supervised data science algorithms *(Decision Tree)* in *R* from ETL and data pipelines to improve the odds to make a profit on small bet lines

Data Analysis and Visualization | *github.com/bking2415/Uber-data-analysis*

- Implemented visible analytic concepts to assist in understanding complex data and gain business insights using *Tableau* and *R* libraries *(ggplot2, dplyr, and tidyr)*

EDUCATION

NORTH CAROLINA STATE UNIVERSITY

Raleigh, NC

Ph.D. in Textile Technology and Management

Graduation Date: December 2021

- **Dissertation Topic:** Applying Data Analysis and Machine Learning Methods to Model Healthcare and Textile Data Applications

Masters in Operations Research

Graduation Date: December 2017

- **Affiliations:** Black Graduate Student Association - *Finance Committee Chair (2018)* | Minority Engineering Graduate Student Association

CLAFIN UNIVERSITY

Orangeburg, SC

B.S. in Applied Mathematics

Graduation Date: May 2015

- Alice Carson Tisdale Honors College Scholar
- **Honors:** Cum Laude | 100 Black Men Scholar
- **Affiliations:** National Society of Black Engineers - *Academic Excellence Chair (2015)* | Kappa Alpha Psi Fraternity, Inc. - *Vice President (2014)*

CERTIFICATIONS

Data Science Foundations Graduate Certificate
by NC State University

Machine Learning Certification
by Stanford University (Coursera)

ACHIEVEMENTS

Microsoft Azure Machine Learning Scholarship
by Udacity

PROGRAMMING LANGUAGES

Python | C | Java | JavaScript | Clojure

STATISTICAL ANALYSIS TOOLS

R | VBA | SAS | JMP | MATLAB

DATABASE TOOLS

SQL

DATA VISUALIZATION TOOLS

Tableau

SOFT SKILLS

Team Oriented | Leadership | Problem Solver | Dependable | Visionary Thinker | Adaptable