CHRISTOPHER HENSON

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EDUCATION

The University of Texas at Austin — Master of Science in Business Analytics — May 2020
Cumulative GPA: 3.63

Texas A&M University — Bachelor of Arts, Mathematics (minor in Cybersecurity) — May 2018

EXPERIENCE

Bank of America – *Assistant VP, Financial Engineering;* Atlanta, GA — August 2020 - present
- Developed and maintained Quantitative Finance's valuation tools for an $800BB fixed income portfolio
- Created an automated calculation and monitoring system for attribution of bank-wide changes in liquidity ratios
- Redesigned yield curve PCA (and uses for downstream models) as part of the LIBOR transition
- Designed and implemented custom CI/CD, package management, and automated testing for in-house packages and applications

Walmart – *Business Analytics Capstone;* Austin, TX — Spring 2020
- Programmatically compiled publicly available reports (SEC filings, Proxy Statements, Earnings call transcripts, etc.)
- Utilized NLP and time series methodologies to model trends in topics across competitors for a ten-year period
- Developed a regression model that connected topic modelling results and financial metrics for Walmart and competitors

NONPROFIT WORK

College Advising Corps – *College Adviser*; Houston, TX — July 2018 – June 2019
- Direct advisor to over 700 high school seniors, primarily from low-income and underrepresented backgrounds
- Designed a website and database to automatically generate college recommendations for high school seniors
- Lead a workshop at a national conference (approximately 1000 attendees) on utilizing technology in college admissions

Jack Kent Cooke Foundation – *Application Reviewer*; Houston, TX — October 2018 – January 2019
- Reviewed applications for the Cooke Foundation's College Scholarship Program in committee-based evaluation of candidates

ACADEMIC PROJECTS/COMPETITIONS

American Sign Langue Gesture Recognition (link to project) — Fall 2019
- Created a predictive model that classified from a corpus of 60 ASL signs recorded with a motion capture device (Leap Motion)
- Using Linear Discriminant Analysis on a set of engineered features, achieved an average accuracy of 80 – 89%

Humana Mays Healthcare Case Competition (link to project) — Fall 2019
- Finalist team, ranking top five out of over 400 submissions from graduate-level students
- Built an ensemble model (gradient boosting/random forest) to identify patients at risk for opioid addiction with .92 AUC-ROC
- Implemented a web application to deploy our model at the point of patient prescription

CONFERENCES/INVITED TALKS

Importance of Programming in Research — Spring 2020
- Invited panelist for Student Research Week Competition at Texas A&M University

Generalized Summation Methods for Divergent Series — Spring 2017
- Researched assigning values to divergent series and applications to physics and microelectromechanical systems
- Funding provided by the National Science Foundation to present at the 2017 Southeastern Undergraduate Mathematics Workshop

A Historical Survey of French Number Theory (link to paper) — Fall 2016
- Translated 18^{th} - 19^{th} century mathematics and analyzed their significance in the development of number theory
- Funding provided by the Texas A&M Department of Mathematics to present at a Mathematical Association of America conference

TECHNICAL SKILLS

Primary Languages/Technologies: Python (including Flask, tornado, scikit-learn, etc.), R, SQL, Git, Linux, Azure
Secondary Languages/Technologies: Haskell, Perl, C++, PHP
Statistics/Machine Learning: Optimization methods, PCA, Clustering/Classification, Neural Nets, Bayesian Estimation
Mathematics: Complex/Real Analysis, Number Theory, Linear Algebra, Introductory Cryptography
Quantitative Finance: Yield Curve PCA, Optimization of Trading Decisions, Analysis of Mortgage-Backed Securities and Mortgage Service Rights, Monte Carlo Pricing Methods
Languages: Written proficiency in French