Alfred Prah

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EDUCATION

Master of Science in Data Science, 2021 — **Vanderbilt University, Nashville, TN**
GPA: 3.60/4.00

Bachelor of Arts in Communication of Science and Technology, 2019 — Vanderbilt University, Nashville, TN
Minor: Corporate Strategy

EXPERIENCE

Data Scientist & Dev. Lead, Launch Consulting Group — August 2021 – Present

- Reduced the cold start problem of a data product by 25% by creating & translating UML diagrams to an Amazon Redshift database schema & populating 3 key tables with simulated data to depict real-world use cases & scenarios.
- Reduced latency by 10% by Refactoring & optimizing 21 PySpark & Scala notebooks to adapt their codebase & Machine Learning algorithms from Databricks to Azure Synapse Analytics for Microsoft's Workplace Analytics platform.
- Improved the performance of 4 recommender systems in production by an average of 60% by shifting from an exclusively collaborative-filter approach through predetermined tier groups to a hybrid version that included a content-based approach.

Data Science Intern, GEODIS — January 2021 – May 2021

- Implemented, optimized and deployed 200+ Time Series models to forecast volume and labor demands in the warehouses of 37 different clients/accounts, leading to $100,000+ in savings.
- Created diagnosis reports for 11 "faulty" Time Series models by performing root cause analysis & implementing actionable next steps, leading to a 32% reduction in Root Mean Squared Error (RMSE) across board from the 300+ models in production.
- Developed the Python style guide adopted internally within a Data Science team of experienced hires.

Teaching Assistant - Modalities of Textual Analysis (AWS, Databricks, Apache Spark) — September 2020 – April 2021

- Collaborated with lead teachers to develop curriculum & recognize academic Data Science issues 10 students faced while exploring natural language processing tools (BaseX, CoreNLP, ParalledDots, Netsblox), big data querying tools (AWS Elastic MapReduce, JSONL, JSONiq, Rumble) and big data processing tools (Databricks, John Snow Labs NLP, Apache Spark).

Data Science Research Asst., Vanderbilt Research on Conflict and Collective Action (ROCCA) Lab — May 2020 – May 2021

- Predicted civilian sentiment with an 81% accuracy by using text data & PyTorch to design & build a deep learning classifier.
- Created client-facing dashboards using visualization tools like Tableau, R Shiny and Streamlit to explore & highlight dynamic links between civilian-led collective action and conflict trajectories over time, within the United States of America.
- Used text data to design & implement descriptive social networks to highlight 100s of key conflict actors in Sub-Saharan Africa, their respective affiliations, and how their network connectivity has changed over the last 2 decades.

Data Science Intern, OhanaHealth — May 2020 – August 2020

- Designed, implemented & deployed a hybrid, deep-learning, recommendation engine (using Transfer Learning) to surface 100s of job openings & their respective descriptions to 1000s of end-users, resulting in a 5% conversion rate for paid subscriptions.
- Performed A/B testing to investigate & strategically advise on user-interactions with varying website layouts & call-to-action buttons.
- Improved click-through rate from targeted ads by 12% by creating & equipping the marketing team with user personas and market segment descriptions, leading to better-informed ad placements & purchases.

Data Science Research Asst., Vanderbilt Data Science Institute — February 2020 – May 2020
(Deep Learning in Natural Language Processing)

- Predicted settlement & 54 other outcomes of class-action lawsuits by using Deep Learning and open-source Natural Language Processing techniques to build a hybrid model (RoBERTa + Fast.ai), resulting in an 86% accuracy in predictions.
- Data: ~3,000 legal cases with 18,000 PDFs overall, some of which were not text readable.

Machine Learning Buchanan Fellow, Jean and Alexander Heard Library — January 2020 – May 2020
(Optical Character Recognition)

- Transcribed 100s of archival documents by adapting the Transkribus framework to teach a computer to recognize & infer handwriting, leading to digital copies of important documents that would otherwise be lost to wear & tear.

Consumer Behavior Researcher, Vanderbilt Owen School of Management — May 2018 - December 2018
(Psychographics and Emotional Motivators – for Dono)

- Informed the marketing and go-forward strategy of Dono by designing research methodology, creating surveys, and producing actionable insights from survey findings, resulting in a $5,000 positive cashflow for a brand that was in debt 6 months prior.

PERSONAL PROJECTS

- Hit-or-not: [In Progress] Used HTML, Google Cloud & a deployed Machine Learning model to create a client-facing platform for up-and-coming musicians to upload audio files and determine how their songs compare to ones that have historically charted on The Billboard **Hot** 100.
- Car Oracle: [In Progress] Using React.js, Azure & APIs to create a client-facing platform to revolutionize the car-buying process.