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CAREER SUMMARY

Data scientist with over four years of experience in the marketing industry, focusing on building reusable and accurate propensity and forecasting models to generate custom audiences and predict future values, developing in varied cloud environments such as Google Cloud Platform and Databricks. Supported by over ten years of experience in the semiconductor industry as a product test engineer and technical lead.

TECHNICAL SKILLS

Tech Stack

Google Cloud Platform, Microsoft Azure, Databricks, Amazon Web Services, IBM Cloud Pak for Data, Snowflake

Python, PySpark, SQL, HTML / CSS / Javascript, Ruby / Perl, Tableau, R

Machine Learning

Random Forests, Gradient Boosting, KNN, XGBoost, Support Vector Machines, K-Means

Topic Extraction, Sentiment Analysis, SMOTE, Tomek Links, PCA, Factor Analysis, LDA

PROFESSIONAL EXPERIENCE

VML MAP | Austin, TX (Remote Austin, TX) | 2024

Data Science Manager | 2024 - Present

- Engineered a website actions forecasting model incorporating media expenditure, economic variables, recent visit trends, and XGBoost algorithm. Implemented lagged input variables by one to several months to accommodate delayed and prolonged impact of input variables, particularly media spend.
- Implemented an automated process using Databricks Workflows to execute monthly forecasts,, a process that encompasses updating data sources, creating lagged input variables, performing feature selection and engineering, and training and tuning an XGBoost regression model.

Wunderman Thompson Data | Richardson, TX (Remote Austin, TX) | 2020 - Present

Senior Data Scientist | 2021 - 2023

- Enhanced existing COVID-19 vaccine demand projection tool by integrating front-of-store purchases and pharmacy interactions with CDC-identified COVID-19 comorbidities, political affiliations, county election outcomes, social and lifestyle preferences, household demographics, and medical history. Identified individuals most inclined to return for booster shots or vaccinate their children.
- Developed a lookalike model to predict the likelihood of current pharmacy customers to discontinue engagement, integrating first-party transaction data with third-party individual attributes such as income, household composition, and health history, facilitating proactive measures to mitigate customer churn.

- Utilized multiclass and binary classification models to map survey-based segments onto the client's customer base, addressing class imbalance through a combination of SMOTE and Tomek techniques. Employed linear discriminant analysis to streamline the feature space, enhancing the predictive accuracy of XGBoost models.

Data Science Intern | 2020 - 2021

- Utilized Google search results and epidemiology measurements, both at a designated market area aggregation, to generate a COVID-19 vaccine demand forecasting tool, identifying geographic areas with highest interest.
- Generated a scoring system to identify US individuals most likely to get a COVID-19 vaccine, integrating attributes such as travel interests and health-related purchases.
- Executed latent dirichlet allocation to extract topics from responses to open-ended survey questions, highlighting issues of most concern to the client's customers.

Advanced Micro Devices | Austin, TX | January 2008 - August 2018

Silicon Debug Lead | 2018

- Managed technical issues originating internally or reported by the customer.
- Coordinated debug efforts across technical and business organizations, ensuring all requirements were gathered and all stakeholders were updated on the current status.
- Recognized with a Spotlight Award for enabling on-time delivery of engineering samples to the customer while under a significant time crunch and overcoming infrastructure delays and software limitations.

Product Test Engineer | 2013 - 2018

- Executed product performance characterization and spearheaded failure investigation.
- Triaged product engineering issues, prioritizing by impact, and driving execution.
- Recognized with multiple Spotlight Awards for debugging and resolving significant yield fallout on semi-custom products with IP co-developed with external customers.

SCAN Test Engineer | 2012 - 2013

- Validated SCAN patterns, executed pattern characterization, and debugged failures.
- Generated and executed test plans for SCAN pattern bringup and production integration.
- Coordinated with designers to root-cause, fix, or work-around bugs found in patterns.

System Level Test Engineer | 2008 - 2012

- Measured per-application performance for characterization and production integration.
- Implemented application reliability and performance measurement flows in Ruby.
- Recognized with Spirit of Success Award for enabling accelerated production enablement of first-ever CPU+GPU microprocessor solution.

RELEVANT PROJECTS

Instacart Order Analysis | [GitHub](#) | [Medium](#)

- Used machine learning techniques to segment users and predict order lag time
- Used PySpark in conjunction with SQL commands to combine and transform data from six CSV files to create three data frames that better associated related information.
- **Tech:** PySpark, Pandas, Numpy, Seaborn, SciKit-Learn (K-Means, K-Nearest-Neighbor, Silhouette

Coefficient, Principal Components Analysis)

Segmenting NBA Players | [GitHub](#) | [Medium](#)

- Used clustering algorithms with performance metrics to segment NBA players
- Calculated silhouette coefficients to measure intra-cluster similarity to select optimal clustering algorithm from K-Means, agglomerative clustering, and Gaussian mixture models.

Predicting NBA All-Stars | [GitHub](#) | [Medium](#)

- Used predictive algorithms with performance metrics to predict NBA All-Star selection
- Implemented Synthetic Minority Over-Sampling TEchnique, or SMOTE, to counteract the effects of class imbalance, as ~95% of the observations belonged to one class.

EDUCATION

- **Thinkful** | Data Science | June 2020
- **University of Texas** | Bachelor's of Science | Electrical Engineering | December 2007

AWARDS

- **Executive Spotlight Award** | AMD | 2016
- **Spotlight Award** | AMD | 2018, 2016, 2008
- **Spirit of Success Award** | AMD | 2012