ASHWIN BALASUBRAMANIAM

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TECHNICAL SKILLS

Languages/Software: Python, R, SAS, C++, C, HTML, JavaScript, PHP, VBA, JMP, MATLAB
Library/Framework: TensorFlow, Pytorch, Scikit-Learn, Pandas, Spark, Numpy, Keras, Matplotlib, OpenCV, Flask
Databases and Tools: Amazon Redshift, BigQuery, PostgreSQL, Hadoop, MySQL, MongoDB, SQL Server
Visualization: Tableau, Power BI, Dash, Shiny, Plotly
Software/Cloud: Amazon Web Services, Azure, Google Cloud, Git, Heroku, Docker, Kubernetes, Linux
Analytical Skills: Regression Analysis, A/B Testing, Classification and Clustering, Neural Network, Time Series, Decision Trees, Natural Language Processing, Computer Vision, Customer Analytics, Survival Analysis, Big Data, ETL

EXPERIENCE

MICROSOFT | *Data Scientist – Practicum* ***Aug 2020 - Present***

- Identifying factors and patterns relevant to Microsoft cloud customer journey to provide actionable insights to the Azure Customer Growth Analytics team and senior leadership
- Building a predictive model to intervene customers before filing a ticket by analyzing over 150 million rows of customer data using techniques such as multi-level logistic regression, sequence analysis, and survival analysis
- Building scalable distributed data solutions using Dask and PySpark and setting up PostgreSQL database
- Implementing the Scrum Framework to plan and organize project tasks and quickly deliver value

NORTH CAROLINA STATE UNIVERSITY | *Research Intern* ***Dec 2019 - May 2020***

- Implemented several neural network approaches (CNN, RNN, HAN, BERT) and traditional NLP Methods (Logistic Regression, Naïve Bayes) to detect suggestions in Peer Assessments and achieved 93.1 % F1
- Worked on co-learning and semi-supervised learning models. to generate synthetic labels and conducted literature reviews in the field of Natural Language Processing and Transfer Learning
- Publications: "Detecting Problem Statements in Peer Assessments" EDM 2020, May 2020

PROJECTS

Diamond App *(Pandas, Numpy, Scikit-Learn, MongoDB, Flask, JavaScript, HTML/CSS)*

- Developed a Responsive Web Application for predicting the price of diamonds and hosted in Heroku
- Collected over 130 thousand diamond features by scraping and carried out comprehensive Data Analysis, Preprocessing followed by Feature Engineering, Feature Selection and Modeling achieving an R-Squared 0.94

Natality care Prediction *(BigQuery, Apache Beam, Google ML Engine, Pandas, Scikit-Learn, Flask)*

- Designed a birth weight prediction model to identify babies in need of special care by using a wide-and-deep learning model and deployed it on Google App Engine
- Used BigQuery and Apache Beam pipeline to load, feature engineer and transform 140 million rows on cloud

Lending Club Risk Assessment *(Pandas, Numpy, Scikit-Learn)*

- Improved the credit grading scale by Identifying customer segments and key features to target loan defaults for the lending club using clustering (K-Means) and ensembling techniques (XGBoost)
- Determined the effect of economic recession on Lending Club and calculated the potential revenue lost due to prepayments and charge offs by analyzing the associated risk profits thus translating it into decision-ready insights

Ozone concentration Forecasting *(statsmodels, keras, python, SAS)*

- Predicted ozone concentration using ESM, ARIMA-X, UCM and Neural Network (RNN) to determine significant factors and their corresponding lags associated with ozone levels
- Estimated the effect of the COVID pandemic on the anomalous changes in ozone concentration

EDUCATION

Master of Science in Analytics, Institute for Advanced Analytics ***June 2020 - May2021***
Industrial Engineering graduate coursework ***Aug 2019 - May2020***
North Carolina State University, *Raleigh, NC, USA*
Bachelor of Technology in Mechanical Engineering ***Aug 2015 - May 2019***
SRM Institute of Science and Technology, *Kancheepuram, India*

CERTIFICATIONS

Certifications:AWS Certified Cloud Practitioner, TensorFlow Developer, SAS: Base Programmer, SAS: BusinessAnalyst