Ashwin Murugappan

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EDUCATION

Master of Science in Industrial Engineering - Northeastern University, GPA 3.90/4.00　　　　**Dec 2020**

Coursework - Probability & Statistics, Data Mining, Deterministic Operations Research, Data Management, and Database Design, Data Visualization, Machine Learning in Finance, Algorithms for Digital Marketing

Bachelor of Science in Mechanical Engineering – Anna University, India, GPA 4.00/4.00　　　　**May 2018**

RELEVANT SKILLS

Databases and Warehouses	Oracle SQL Developer, MYSQL, MS SQL Server, MongoDB, Snowflake
Business Intelligence	Tableau Desktop, Power BI, Qlik Sense, Qlik View, Looker, Tibco Spotfire, AWS Athena
Programming Languages	NoSQL, SQL, Python, R, JavaScript, PySpark, Shell Scripting
Cloud Stack	AWS Redshift, AWS RDS, Lambda, Google Cloud SQL, BigQuery, Cloud Functions
Analytics tools	MS Excel, Google Analytics, MS Access, Alteryx, Tableau Data Prep, SSAS, SSIS, SSRS

EXPERIENCE

Data Analyst, Post Market Systems, Abiomed, Inc., Boston, MA　　　　**Jan 2020 – Sep 2020**
− Built automated Tibco dashboards to measure and monitor product failure patterns, increasing operational efficiency by 20%
− Developed python web crawler to scrape and search over 500,000 medical research papers to identify potential complaints
− Modified existing data integration packages to merge data tables from salesforce, complaints, and legacy systems
− Collaborated with cross-functional stakeholders to identify KPI's for product performance, resulting 15% decline in failure rate
− Optimized SQL queries to analyze complaints data and identify root causes of issues and deliver data-informed decisions
− Led training programs to promote, engage and demonstrate intuitive and visual analytics tools to all partners

Data Analyst, Research Assistant, Northeastern University, Boston, MA　　　　**Jan 2019 – May 2019**
− Designed a data warehouse for an Intensive care medical database containing 500 million records on Microsoft SQL Server
− Developed data integration workflows to extract, transform and load data into the data warehouse for statistical modeling
− Built interactive, self-service dashboards on Tableau to track progress and provide ongoing insight to research grant providers
− Collaborated with doctors to perform statistical analysis on treatment records, estimated 20% of treatment as not necessary
− Spearheaded development of new work breakdown structure that improved the efficiency by 10% in after deployment

Operations Analyst Intern, Ashok Leyland, Anna University, Chennai, India　　　　**Jun 2016 – Jun 2018**
− Devised a one-stop-shop interactive dashboard in tableau for inbound, outbound inventory tracking for the operations team
− Engineered VBA macros which enable a one-click process for presenting revenue figures from the database directly to the suppliers as a PowerPoint presentation, saving 2 hours of manual run time
− Collaborated with engineering teams to automate inventory reconciliation which resulted in a 15% decline in financial losses
− Formalized cost analysis to identify potential suppliers and appropriate order lead time to reduce procurement cost by 10%

PROJECTS

NBA Data Integration and Visualization | Python, Redshift, AWS RDS, Trifacta　　　　**June 2020**
− Performed data profiling and designed the Star Schema Dimensional model for NBA database of containing 5M records
− Automated python scripts to scrap data from 15 different client-side and server-side API endpoints every other day
− Designed integration packages to extract data from RDS, transform with Trifacta and ingest it into Redshift for analysis
− Built interactive dashboards using Tableau and Power BI to convey stories of team performance and player segmentation

Time series forecasting of Apple stock | Python – NumPy, Pandas, Matplotlib, Scikit Learn　　　　**Nov 2019**
− Identified patterns and trends in APPL stock price over 10 years by utilizing MA, MACD and Bollinger Bands
− Performed feature selection with PCA and Elastic Net to reduce the feature count from 200 to 10
− Forecasted stock price using regression, ARIMA, SVM and built a trading strategy that delivered an ROI of 20%

Role based access control database design | SQL Server Management Studio, MS SQL, Tableau　　　　**Aug 2019**
− Built a relational database containing employee and authorization information on MS SQL based on predefined business rules
− Optimized query execution and created Triggers, Views, Stored Procedures on the dataset to control the authorization process
− Designed automated Tableau dashboard which measures and monitors the IT infrastructure cost

Credit Card Fraud Detection | Python, PySpark, Alteryx, Power BI, TensorFlow　　　　**Jan 2019**
− Performed Initial exploratory data analysis on the credit card dataset constraining 3.7M records and 15 dimensions
− Devised hyper parament tuning on 15 algorithms with Cross-validation to find the best parameters for classification customer
− Performed feature engineering on predictor variables to improve model performance and achieved a RMSE of 0.136