***Reddy Yugandhar--1-929-489-7974 -*** [***brooklinite81@protonmail.com***](mailto:brooklinite81@protonmail.com)***||Certified AWS Cloud ML Expert --***[***https://github.com/TravelReddy***](https://github.com/TravelReddy)

* 10 years of experience as Reporting Analyst, Business Data Analyst and Data Scientist across wide variety of business areas such as Technology, Finance, Reporting and Analytics
* 4 years of experience in building data science solutions using AI, ML, DL, Statistical Modeling, Data Mining, Natural Language Processing (NLP) and Data Visualizations
* Experience on applications of Machine Learning algorithms for credit risk, life cycle predictions, fraud detection, time series forecasting, efficiency, propensity modeling and stress testing
* Advance knowledge of statistical probabilistic predictive supervised, unsupervised, semi supervised, ensemble learning and reinforcement ML models (GLM/Regression, clustering, dimensionality reduction, random forests, time series analysis, Naïve Bayes, KNN. Well versed in ensemble algorithms including boosting and bagging applications.
* Expert knowledge of regression methodologies including gathering, exploring, analyzing missing, erroneous or incomplete, biased large data sets using python and associated libraries. Perform oversampling and under sampling to balance data sets. High dimensional variable selection with statistical modeling including non-parametric regression
* Acquire structured and unstructured data, prepare, perform EDA, insights, investigations, extractions, cleaning, imputation, transformation, standardization, L1, L2 generalization to build sustainable quality data sets. Conduct Hypothesis testing, Propensity modeling, test of significance and ANOVA on data sets.
* Building dashboards, histograms, graphs, charts with interactive visualizations from raw data using Tableau, QlikView, SQL Server, MicroStrategy, Matplotlib, Seaborn, Bokeh for insightful inferential decision making
* Design, train and apply statistics, mathematical models, and machine learning techniques to create scalable solutions for predictive learning, forecasting on large-scale cloud-based distributed data processing pipelines and validate model accuracy by test and evaluation procedures
* Experience with cloud platforms (Google Cloud, Azure, and AWS). Build efficient, ethical and quality data sets encompassing dimensions of data quality. Qualitative and Quantitative data analysis for reporting
* Experience in software development environment in Scrum, Agile, Waterfall along with code management/versioning, CD/CI (git, Jira). Excellent communication, presentation, problem solving skills

**Technology Stack :** Python, Linux, R, Matplotlib, Jupyter Notebook, Numpy, Pandas, Scikit Learn, Seaborn, Bokeh, D3.js, pillow, keras, tensorflow, SQL, PyTorch, AWS, Azure, Visual Studio Code, Git, Docker, Kubernetes

*Professional Experience:*

*Idaho National Laboratories, Idaho Falls, ID Jul 2020 – Current*

*Data Scientist*

* Write API codes for data sourcing and distributions for internal and external data sharing application in python for supply chain logistic applications.
* Generalized linear models (Lasso, Elastic net, Adaptive Lasso, MCP, SCAD) for multivariate high dimensional data along with naïve bayes probabilities, sensitivity analysis for bio feed stock predictions.
* Automate internal data retrieval, data analysis and visualization pipelines using python and R. Translate R code to Python for research paper publications.
* Apply sigmodal function-based prediction models for Li Ion battery life cycle for multivariate low frequency time series applications.
* Manage, monitor, update, compare existing models in cluster environments (CPU/GPU interactions/transfers, latency/throughput bottlenecks during training of neural networks, CUDA, pipelining/multiprocessing). Selection of computationally effective variable selection methodologies. Image preprocessing steps like contrast enhancement, noise reduction, segmentation, filtering.
* Develop, train, deploy machine learning and deep learning models on a computing cluster to perform visual object detection, feature detection, localization, transformations, orientation for nuclear reactors.

*Moody’s Analytics, Manhattan, NY Dec 2016 – Mar 2019*

*Data Scientist and BI Developer – Enterprise Risk and Stress Testing*

* Participate in design, implementation of data platforms and processes to capture, integrate, analyze and distribute information on the AWS cloud for legacy and cloud platforms to reduce latency, gather analytics and build scalable AI, ML applications
* Write SQL, Python queries to extract and analyze large data sets. Extract data and develop visualizations relevant for analysis, decision making and reporting
* Worked on sampling techniques for heavily imbalanced data sets followed by exploratory data analysis achieving a balanced bias, variance tradeoffs along with solutions for overfitting and underfitting cases
* Experience in evaluating the quality of ML models via appropriate classification, regression metrics such as mse, rmse, mae, confusion matrix, loss functions and validation curves such as AUC, ROC, Cross Validation.
* Experience performing basic hyperparameter optimization to find the global minima using gradient descent, cross validation, grid search and randomized search methodologies
* Dealing with missing data via standardized Imputation methods such as SMOTE, mean, mode, K-nearest neighbors (KNN), fuzzy K-means (FKM), singular value decomposition (SVD), Bayesian principal component analysis (bPCA) and multiple imputations by chained equations (MICE), data splitting, feature engineering, hyper parameter optimization via feature reduction, feature importance and feature engineering
* Build an automated ML RWA forecasting system solutions to supplement credit risk reporting, credit worthiness, outlier detection requirements using Linear, Logistic and Decision tree, Random forests algorithms.
* Assist in the development of a CCAR program for banks (IHC’s) for RWA forecasting, stress testing using Basel I, Basel 3 advanced and standardized methodologies involving AR, MA, ARIMA, VAR and MARS models for low and high frequency data sets.

*Depository Trust and Clearing Corporation, New Port, NJ Nov 2013 – Nov 2016*

*Quantitative Business Data Analyst*

* Develop an efficient Risk platform to supplement, monitor and report on clearing services for NSCC, FICC reducing and spreading market, credit risk components
* Liaise between liquidity business users and liquidity systems development group to develop solutions for better clearing services for Fixed Income, Equities for NSCC and FICC subsidiaries and conduct stress testing
* Perform in-depth data analysis for all the interfacing systems involved in clearing services. Perform data gap, lineage, quality and quantitative assessments
* Interact closely with the business and provide detailed analysis and documentation of processes and flows for continuous netting settlement and automated account services transfer processes.
* Clearly document requirements for trade clearing, settlement process and Master Data management area to manage data risk. Create data dictionaries, business glossary, lineage artifacts
* Perform qualitative and quantitative data analysis to deliver risk metrics and data analytics using techniques data aggregation. Improve the performance by analyzing the data models and eliminating redundant data
* Develop a reporting platform for all the submissions to ensure reporting across various functional areas for analytical purposes to drive key decision making
* Work on custom distributed software systems built in JAVA and C## environment
* Document data Mappings/Transformations sessions. Resolve data gap issues. Write SQL programs to test, develop data against the requirements

*PNC Bank, NY, NY Jul 2011 – Oct 2013*

*Business\_Data\_Reporting Analyst*

* Create Strategic Submission Hub to automate submissions for OCC/CCAR/FHLB.
* Perform current state assessment, gap analysis and involved in creating a future state architecture for the successful submission of Supports FR Y-14A/Q/M, Credit card account, portfolio level, 1st lien mortgage details.
* Conduct Requirements Gathering sessions, Data flow diagrams and case analysis reports.
* Develop requirements specifications (Business and Functional requirements, etc.) document with agreed requirements, obtaining sign-off from the key stakeholders
* Analyze the data risks involved in the submission data and develop Solutions and Plans. Responsible for interfacing, Integrating reports and data with the new system
* Create test cases and test templates and guidelines to be used by the QA team.
* Facilitate review sessions with data aggregators. Identify solutions for data queries raised by the aggregators
* Oversee execution, data reconciliation, regression testing and translating manual test case scenarios into automated test scripts in order to validate requirements.
* Manage policy documents, FRB requirements compliance documentation and legal/regulatory agreements to ensure capital program meets program requirements
* Incorporate features for data quality, control totals and balances, metrics collection, and error collection as also assist in implementing SAS tools and its common usage across ETL, DQ and testing teams
* Experience in performing UAT testing to validate the migrated data and move into production

*GE Capital/Treasury, Stamford, CT Jul 2009 – Jan 2011*

*Business Data Analyst*

* Responsible for FXS Migration Phase I and ii is to migrate capital markets derivative data from legacy systems to WSS.
* Conduct data requirements gathering sessions, Perform analysis of schemas before integration. Choose schemas and their order of integration
* Define business requirements and the scope. Define data standards for GE entities, portfolios and counterparty based on the new system.
* Analyze impact of data interfacing capabilities with the target system WSS. Facilitate data reconciliation and UAT. Create and contribute to artifacts for data dictionary and repository
* Create data migration strategy based on company objectives and optimizing performance. Understand derivative domain of as is data systems and to be systems
* Analyze data risks involved in the project and develop risk mitigation solutions, plans and report on the progress through weekly meetings
* Improved system performance by analyzing the metadata structures and eliminating redundant data. Designed archival strategy for the out of scope data
* Provide weekly, monthly status reports and status meetings along with the process owners, project managers and stakeholders with the data metrics

*RW Baird Jan 2008 – Jul 2009*

*Quality Data Analyst*

* Develop and integrate the data to serve business users and clients by building a metadata repository for the reporting
* Analyze business requirements and create functional specifications. Design data models, data flow diagrams and case analysis reports. Capture reporting and metadata requirements
* Modeling and populating the business rules into repository for metadata management.
* Development of data transformation layer to load, transfer data into various tables, formats in data marts and defining lineage
* Perform data mining and data enrichment in business intelligence and performance management areas. Validate and reconcile data
* Document source to target data mappings/transformations sessions. Resolve data gap issues. Maintain issue tracker for reporting and mitigation
* Responsible for data modeling and creating model documentation through data analysis by extracting data elements from various data marts using XML
* Create test cases and test templates and guidelines to be used by the QA team in Java and J2EE environments
* Assist the team in executing, data reconciliation and translated manual test case scenarios into Automated test scripts in order to validate requirements

*Education:*

MS – Electrical Engineering and Mathematics – SDSU, USA

BS – Electrical Engineering – JNTU, India

CFA Level ii Candidate