Monika Bagyal

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Technical Skills

Programming Languages: Python, R, Unix Shell Scripting, PL/SQL, SQL.
Data Libraries: scikit-Learn, pandas, seaborn, NumPy, matplotlib, NLP, TensorFlow, Keras, Pytorch.
Tool: Informatica PowerCenter, Actimize, Toad, Tableau, SQL Server, Autosys, SAS Text Miner, SAS Sentiment Analysis.
Other: Git/GitHub, AWS EMR and S3, Algorithms and Data Structures.

Education

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE ***Charlotte, NC, USA***
Master's in Computer Science - Data Science Concentration *Aug 2019 – Dec 2020*

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE ***Pilani, Rajasthan, India***
Master's in Software Engineering *Jan 2011 – Nov 2014*

HNB GARHWAL UNIVERSITY ***Uttarakhand, India***
Bachelor of Computer Applications *Jul 2007 – Jun 2010*

Academic Projects

Identifying Suspicious Activities in Financial Data ***Dec 2019***
- Developed a Machine Learning system which shows how suspicious activities can be separated using a supervised learning algorithm in existing customer data under the compliance department of a bank or financial institution.
- The results show that False Positives can be reduced using Supervised Learning algorithms like Random Forest.

GitHub Location: https://github.com/Minsifye/Identifying-Suspicious-Activities-in-Financial-Data

Finding Donor for Charity Model ***Dec 2018***
- CharityML project involves developing a Machine Learning algorithm to find best identifies potential donors.
- Evaluated and optimized different supervised learning algorithms to achieve the highest donation yield.
- Used Logistic Regression, Support Vector Machine (SVM), Gradient Boosting - Ensemble Methods for modelling.

GitHub Location: https://github.com/Minsifye/Finding_Donors_CharityML

Image Classifier Model ***Feb 2019***
- Implemented an image classification application using a deep learning model on Iris images dataset.
- First, trained the model to classify new images in jupyter notebook and then converted it into a Python application that will run from the command line in a system.

GitHub Location: https://github.com/Minsifye/Image-Classifier-Model

Identify Customer Segments ***Mar 2019***
- Applied unsupervised learning techniques on demographic and spending data for a sample of German households. Data and design were provided by Arvato Financial Services.
- Preprocessed the data, applied dimensionality reduction techniques (PCA), and clustering algorithms (Kmeans) to segment customers with the goal of optimizing customer outreach for a mail-order company.

GitHub Location: https://github.com/Minsifye/Identify_Customer_Segments

WORK EXPERIENCE

UBS ***Bangalore, India***

Senior Software Engineer - Wipro *Nov 2016 – May 2017*

- Designed a data analysis project to provide a descriptive statistical summary from customer's payment data using changeable Threshold. This project helped me to improve my data analysis and data visualization skillset and encouraged me towards Machine Learning.
- Created an Automation system to load 12 months of customer profiling data sequentially to eliminate manual efforts required by the support team. Implemented with UNIX shell scripting, Autosys scheduling tool, and Oracle SQL. This process used a combination of data engineering routines which was coupled to run in a sequence to avoid any dependency failure.
- Implemented multiple Informatica mappings to load daily customer transactions happening on various platforms covered within UBS AML monitoring which further used by providing a centralized global view of daily and monthly alerts. It helps to track suspicious activities in customer's accounts within the bank.
- Provide technical leadership through technical design, code reviews and implementation of best practices that adhere to the SDLC and Release Management processes.

BNP Paribas ***Mumbai, India***

Senior Software Engineer *Dec 2014 – Oct 2015*

- Developed Market Abuse Models to identify Wash & Cross-Market Trade activities using Actimize Analytics engine and Risk case manager. This project required multiple processes, for instance, data filtering, data transformation, and HTML & XML file manipulation for the front-end RCM application used for alerts viewing.
- Developed a Scoring Algorithm, to calculate the risk score based on the client's suspicious activity.
- Optimized Actimize custom models in the Global aspect to keep reusability in mind for different market data like the USA and Paris production environment.
- Detect and solve technology delivery issues and ensure contingency activities are met as they relate to system and application availability.
- Maintain, troubleshoot, optimize and enhance regulatory applications and communicate with technical and non-technical groups.

UBS ***Bangalore, India***

Software Engineer - Wipro *Jul 2010 – Nov 2014*

- Discussions and meetings with Business users and compliance analysts to understand functional requirements in order to be able to design and develop efficient surveillance and supervision compliance risk management platform solutions.
- Developed unified data framework to provide an efficient data integration layer for data management, archival and maintenance.
- Building customized solutions using Actimize suite of tools to combine detection and investigation capabilities for detecting potential market manipulation and client abuse.
- Performing end to end delivery of product implementation from requirements to production.
- Developed an application to load unstructured remittance payments data into Oracle data hub using UNIX shell scripting. This application reduced the expected cost for business and presented a faster solution to transform unstructured remittance data.
- Developed auditing and log management functionality to keep track of the authorized access and policy changes using Oracle PL/SQL functions and procedure.
- Providing technical leadership through technical design, code reviews and implementation of best practices that adhere to the SDLC and RM processes.
- Supporting postproduction bugs and defect fixes.