MONIKA BAGYAL

Charlotte, NC | P: 201-210-9083 | monika.bagyal@gmail.com | linkedin.com/in/mbagyal |
Website - https://minsifye.github.io/portfolio/

EDUCATION

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE   *Charlotte, NC*
Master's in Computer Science - Data Science Concentration   *Aug 2019 - Dec 2020*
Cumulative GPA: 3.85/4.0
Relevant Coursework: Big Data Analytics, Cloud Computing, Machine Learning, Innovation Analytics, Algorithms

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

HNB GHARWAL UNIVERSITY   *Uttarakhand, India*
Bachelor of Computer Applications   *June 2010*

WORK EXPERIENCE

UBS Bank   *Bangalore, India*
Senior Software Engineer   *Nov 2016 – May 2017*
- Created an Automation system to load 12 months of customer profiling data sequentially to eliminate manual efforts required by the support team.
- Provide technical leadership through technical design, code reviews and implementation of best practices that adhere to the SDLC and Release Management processes. Led team of 2 software engineers directly.
- Designed a data analysis project to provide a statistical report on payment data using changeable Threshold.
- 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.

BNP Paribas Bank   *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.
- Designed a Scoring Algorithm, to calculate the risk score (0 to 100) 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.
- Maintained, troubleshooted, optimized and enhanced regulatory applications and communicated with technical and non-technical groups.

UBS Bank   *Bangalore, India*
Software Engineer   *Jul 2010 – Dec 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.
- Automated data engineering tasks to unify data framework to provide an efficient data integration layer for data management, archival and maintenance.
- Building customized data engineering solutions using Actimize suite of tools to combine detection and investigation capabilities for detecting potential market manipulation and client abuse.
- Developed an application to load unstructured remittance data approx. 1million rows into Oracle data hub using UNIX shell scripting by reducing expected cost and presented an optimized solution.
- 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.
- Performing end to end delivery of product implementation from requirements to production. Supporting postproduction bugs and defect fixes.

UNIVERSITY PROJECTS

Disaster Response Model   *Mar 2020*
- Analyzed disaster data to build a model for an API that classifies 26000 disaster messages.
- Build an ETL pipeline, that loads the data, merge it, clean it, and save it in a SQLite database.
- Created a front-end webapp using Flask. Build a ML pipeline, that performs text processing using NLP, and predicted 36 output categories using OneVsRestClassifier.

Sparkify   *Apr 2020*
- Performed data analysis on music streaming data to train a model for customer churn problem.
- Used pySpark programming language to process 12GB of data on AWS Spark platform.
- Achieved 90% f1 score using Gradient boosting classifier.

Recommendations with IBM   *Mar 2020*
- Implemented a rank-based approach, to find the most popular articles simply based on most interactions, to recommend to new users and to tackle the cold-start problem.
- Implemented user-user based collaborative filtering approach, looking at users that are similar in terms of the items they have interacted with to recommended to similar users for more personal recommendations.
- Used SVD to predict user rating, to know how well recommendations are performing.

Auto Insurance Portfolio Loss Ration Prediction   *Nov 2019*
- Performed data cleaning, fixed missing values, and One-Hot-Encoding to transform categorical variables to numerical. Creating visualizations to explore most important features for better prediction rate.
- Compared results of various supervised regression algorithms to achieve lowest possible MAE.

Image Classifier   *Mar 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.

ADDITIONAL

Technical Skills: Python, R, Unix Shell Scripting, PL/SQL, Oracle SQL, ETL, pandas, seaborn, NumPy, NLP, TensorFlow, Keras, Pytorch, Informatica PowerCenter, Actimize, Toad, Tableau, SQL Server, Autosys, SAS Text Miner, SAS Sentiment Analysis, Git/GitHub, AWS EMR and S3, Algorithms and Data Structures.

Certifications: Data Scientist Nanodegree by Udacity (2020), AML and KYC by IIBF (2013)