

MONIKA BAGYAL

Fort Mill, SC | monika.bagyal@gmail.com | [linkedin.com/in/mbagyal](https://www.linkedin.com/in/mbagyal) | Website - <https://minsifye.github.io/portfolio/>

Software Engineer with 6-years of work experience building data solutions and interested in solving challenging problems & to learn new technologies along the way.

TECHNICAL SKILLS

Proficient: Python Programming, SQL, Tableau, Oracle PL/SQL, ETL pipelines, Unix Shell Scripting, pandas, numpy, seaborn, matplotlib, plotly, scikit-learn, Git, Informatica, Autosys(scheduling tool), Actimize, Jupyter notebooks.

Moderate: NLP, AWS Spark, S3, EMR, PySpark, Pytorch, Tensorflow, Open-CV, Scipy, Fast-AI.

Concepts: Computer Vision, Supervised and Unsupervised Machine Learning, Data Warehousing, Relational Database, Algorithms & Data Structures, Data Science, HDFS, MapReduce, Distributed Systems, Data Pipeline, Deep Learning.

WORK EXPERIENCE

UBS Bank, Bangalore, India

Senior Software Engineer, Nov 2016 – May 2017

- Developed multiple ETL mappings as part of data pipelines to load daily customer transactions in ACID compliant production env.
- Deploying algorithms to automate manual process of running ETL jobs to load months of data in the event of production issues.
- Designed and developed a data analysis project to provide a statistical report on payment data using changeable threshold.
- Supervised a team of 2 software engineers while ensuring to follow best practices of SDLC across multiple projects.

BNP Paribas, Mumbai, India

Senior Software Engineer, Dec 2014 – Oct 2015

- Built ETL pipelines to process 10+ millions of trades records, using data filtering, data manipulation and data transformation.
- Created a complex Scoring Algorithm to assign a risk score between 0 to 100, based on highly risked client's trade activity.
- Optimized existing models in production by refactoring code to ingest multiple regions data, documented the changes.
- Experienced in handling production issues, skilled in communicating with technical and non-technical groups.

UBS Bank, Bangalore, India

Software Engineer, Jul 2010 – Dec 2014

- Reduced project cost, by developing a solution to read unstructured data file (approx. 5 TB of data) using Shell Scripting.
- Optimized Informatica ETL mappings to improve performance and reduce data redundancy using data modeling concepts.
- Audited authorized user activity and thresholds changes in database using PL/SQL to report and keep system compliant.
- Implemented a Risk score filtering approach using SQL based on customer's KYC and historical data to produce new alerts.

ACADEMIC PROJECTS

Autonomous Driving

Oct 2020

- Trained a neural network using NumPy, SciPy and OpenCV to predict steering angles, got RMSE of 6.8 in 30sec training time.

[Sparkify - Data Science Project on AWS Spark](#)

Apr 2020

- Performed data analysis and feature engineering using pySpark on music streaming data for customer churn problem.
- Trained a model using Gradient boosting classifier to achieve a higher F1 score on AWS Spark to process 12GB of data.

[Disaster Response Model](#)

Mar 2020

- Analyzed disaster data to build a model for an API that classifies 26000 disaster messages. Built a webapp using Flask.
- Build an ETL & ML pipeline, to perform text processing using NLP and load it into SQLite, to predict 36 disaster categories.

[Recommendations with IBM](#)

Mar 2020

- Generated individual article recommendations for similar users by using collaborative filtering approach.
- Predicted user ratings by applying SVD to evaluate overall performance for new recommendations.

[Hackathon - NLP project on Yelp Reviews Data](#)

Feb 2020

- Project idea was to provide key insights from reviews to help customer make decision faster.
- Generated visualizations after text cleaning, normalization, tokenization, generated bag-of-words etc.
- Presented this project to 300+ people during All Women Hackathon (Pearl Hacks) at UNC Chapel-hill.

EDUCATION

University of North Carolina at Charlotte

Charlotte, NC, Dec 2020

Master's in Computer Science – Data Science Concentration

Coursework: Computer Vision, Algorithms & Data Structures, Cloud Computing, Machine Learning, Visual Analytics, Big Data Analytics.

Birla Institute of Technology & Science

Rajasthan, India, Nov 2014

Master's in Software Engineering

HNB Garhwal University

Uttarakhand, India, Jun 2010

Bachelor of Computer Applications

Certifications

Data Scientist Nanodegree by Udacity (Apr 2020), AML and KYC by Indian Institute of Banking & Finance (Oct 2013).