

Mohammad Tanzil Alam

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WORK EXPERIENCE

Roche Diagnostics GmbH

01/2023 – 07/2023 *Data Engineer*

Penzberg, Germany

- Developed an ETL pipeline using Python for data extraction, transformation, and loading into a scalable Data Lake.
- Implemented a robust ETL data pipeline for terabytes (TB) of data, enhancing data mining capabilities.
- Preprocessed OCR files into text files and integrated them into Data Warehouse.
- Implemented and automated advanced NLP techniques (TF-IDF) and machine learning models (Word2Vec) for real-time detection of data drift in text data, resulting in a 99.5% increase in data accuracy.
- Achieved a 90% reduction in manual effort, resulting in an increase in processing speed by a factor of 2.
- Successfully integrated automated workflow into the production environment, resulting in time and cost savings.

05/2022 – 07/2022 *Data Engineer Apprentice*

Penzberg, Germany

- Migrated oncology PDF data from the NCCN guidelines into a JSON file.
- Established a cloud data pipeline for JSON oncology reports (PDF) in digital healthcare.
- Utilized an AWS services such as: S3, Glue, Athena, Redshift, VPC, CloudWatch, EC2, IAM, and PySpark for project management.
- Converted JSON files into Parquet for data serialization using PySpark.
- Successfully validated and verified results from SQL output for data curation.
- Enhanced data accessibility, resulting in an 80% reduction in retrieval time and thus increased decision-making efficiency.

Fortress6 Technologies

05/2020 – 05/2021 *Senior Web Application Developer*

Kolkata, India

- Led design, implementation, and maintenance of relational database systems (RDBMS), particularly.
- Wrote cleanly documented code that was easy to maintain, actively participated in code reviews, and identified/solved database-related issues.
- Took responsibility for 7 projects and demonstrated initiative in identifying and solving problems.
- Mentored and supported 10 junior developers by imparting expertise and best practices.
- Collaborated closely with developers, designers, and other stakeholders to translate requirements into database-driven solutions.

06/2019 – 04/2020 *Junior Web Application Developer*

Kolkata, India

- Conducted extensive literature reviews on the design and implementation of SQL database structures in SQL Server.
- Supported experienced developers in tasks such as writing simple queries, data migration, and basic troubleshooting.
- Acquired basic database concepts and best practices through practical experience and mentoring.
- Introduced agile practices, resulting in a reduction of project development time by 2 weeks.
- Received positive customer feedback on verbal and written communication, with a rating of 9 out of 10.

EDUCATION

- 09/2021 – 08/2023
Bremen, Germany
- Master of Science in Data Engineering, Jacobs University Bremen**
- GPA 2.1 (Germany)
 - Master Thesis on Detecting Data Drift in clinical NLP pipeline.
 - **Courses:** Data Analytics, Probability, Statistical Modelling, Neural Networks, Machine Learning, Data Management with Python and SQL, Data Warehouse and Mining.
- 08/2015 – 05/2019
Dehradun, India
- Bachelor of Technology Computer Science & Engineering, Uttarakhand Technical University**
- GPA 1.8 (Germany)
 - Thesis on Online Web application development.
 - **Courses:** Artificial Intelligence (AI), Data Science, Object-oriented programming (OOP), Database Management System (DBMS).

SKILLS

Technical: (AWS, Python, GitHub, GitLab (CI/CD), SQL, Azure, Docker, Snowflake, Java, MS PowerBI, Ubuntu 22.04 LTS (Linux), Kanban, MS Office, R, Bitbucket, Blender 3D, HTML.)

Tools/ Libraries: (Scikit-learn, Pickle, Tensorflow, Pandas, NLTK, geopandas, matplotlib, plotly, Numpy, Jupyter Notebook, R Studio, NetBeans, Visual Studio.)

Soft Skills: (Communication, Problem-Solving, Technical Leadership, Analytical, Data-driven.)

LANGUAGE

Hindi/Urdu (Native) • **English** (C1) • **German/ Deutsch** (B1)

AWARDS

Recipient of a 100% scholarship for an MSc studies., Roche Cooperative Study Program

Academic merit scholarship, Jacobs University Bremen

A+ in MySQL training from Microsoft, ranking among the top 5%, Microsoft Technology Associate

First place on the Internet of Things (IoT) project, Tula's Institute