

Deepana Dhakshinamurthy

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SUMMARY

Data Engineer with 9 years of expertise in SQL, Data Engineering, Database Management, Data Modelling, **Business Intelligence**, ETL Pipelines, Data Warehousing, Cloud platforms (AWS, Azure and GCP) and Data Visualizations. Specialized in leading Performance Tuning, Machine Learning, Cloud Migration projects under **Financial**, Insurance and Healthcare domain

TECHNICAL SKILLS

- **Programming language:** Python, SQL, HTML, C, C++, UNIX, Excel (VLOOKUP, Pivot, Charts)
- **Data Engineering Tools:** Power BI, Tableau, AWS Glue, ADF, Databricks, DBT, Airflow, Docker, SSIS, SSRS, Alteryx
- **Cloud Platform & Storage:** AWS, Azure, GCP, AWS S3, Azure Data Lake
- **Python Libraries:** Pandas, Numpy, Matplotlib, Scikit-learn, TensorFlow, SciPy, Seaborn, Plotly, PyTorch,
- **Database Management System:** SQL Server, Oracle, PostgreSQL, NoSQL, MySQL, Azure SQL, AWS RDS
- **Project Management & Tools:** Agile (Scrum), SDLC, Jira, Azure DevOps, Confluence, TFS, GitHub, Tortoise, SVN

ACADEMIC PROJECT [Northeastern University]

Diabetes Readmission Prediction System [ML | Python]

Jan 2025 to Apr 2025

- Conducted **statistical analysis** on patient records via hypothesis testing, correlation, feature selection to identify key factors
- Optimized and evaluated Machine Learning models (**XGBoost, Random Forest, Decision Tree**) using **MLFlow**
- Monitored model performance, response time and resource utilization, through **Looker dashboards, PyTest** test cases to validate functions, **DVC** for version controlling; Evaluated performance using key metrics like **MSE, RMSE, and R-squared**
- Orchestrated data workflows with Apache Airflow in **Docker** containers on **GCP VM**, deployed ML models on **GCP** buckets and managed CI/CD pipelines via GitHub Actions for streamlined deployment

Chatbot Implementation [LLM | Python]

Jan 2025 to Apr 2025

- Built ChatBot system with Streamlit UI, integrating AWS S3 data into a Snowpipe, designing Data Models via DBT
- Applied **LangChain, MiniLM** embeddings for LLM-based recommendations in Snowpark with **FAISS** for efficient text retrieval

S&P 500 Stock Analysis [ML | Python]

Jan 2024 to April 2024

- Conducted Predictive Analysis of S&P 500 stock values by collecting historical stock values from S&P associated firms
- Deployed ML Models such as Regression, **KNN, Random Forest** and **Decision Tree** and evaluated the performance using statistical metrics F1 Score, MSE, R-Squared, achieving an excellent fit with an R-squared of 0.9

PROFESSIONAL EXPERIENCE

Colorado Department of Transportation

June 2024 to Dec 2024

Data Analytics Intern [SQL | Power BI | Python]

Denver, Colorado

- Constructed interactive **Paginated Power BI reports** and Dashboards (DAX Queries) to analyse Colorado's state bridge inspections, enhancing financial decision-making and reducing **inspection delays by 25%**
- **Developed SQL and Python ETL pipelines** to integrate a new data model into existing improving data accessibility by 35%
- Participated in **Scrum** ceremonies of Agile Methodology, backlog tracking using **Jira** as per **Sprint** goals

Cognizant Technology Solutions

July 2022 to June 2023

Senior Associate/Technical Lead [SQL (T-SQL, MySQL, PostgreSQL) | SSIS | Python | AWS]

Chennai, India

- Led Data Engineering projects by collaborating closely with stakeholders and cross-functional teams from various domains
- Developed **ETL pipelines** using SQL, SSIS, ADF, **Azure SQL DB, AWS S3, AWS Glue, Databricks** to extract Data (Policy, Claims) from multiple sources like API, DB, XML, Json and perform Transformation, Extracts generation
- Enhanced ETL **SSIS** workflows by reducing processing time (**Performance Tuning**) by **50%** through Indexing, SQL Profiler, Execution Plan analysis, Unit Testing, and **Data Validation** using SQL, Python EDA, **Plotly**, and Excel
- Engineered ML models (e.g., **Regression, Random Forest**) using **Python** to predict Insurance claims and evaluated Metrics

Associate [SQL | Power BI | Tableau | Snowflake | Excel]

Nov 2017 to June 2022

- Migrated **SSIS** ETL pipelines to cloud platforms like **Azure, AWS**, and **Snowflake** resulting in a 35% reduction in storage cost
- Crafted Dashboards in Power BI(DAX), Tableau and monitored KPI metrics resulting in **30%** improvement in efficiency

Merit Software Services Private Ltd

Oct 2016 to Oct 2017

SQL Developer [SQL | SSIS | C# (Script Task) | SSRS]

Chennai, India

- Created SQL queries, SSRS reports, and SSIS packages aligned with backend requirements of a web portal
- Automated a manual data loading process using SSIS packages, improving data loading efficiency by 40%

Capgemini

July 2014 to Sep 2016

Senior Software Engineer [MSSQL | SSIS |SSRS |PLSQL]

Navi Mumbai, India

- Analyzing data using SQL, Excel and reports generation through SSRS
- Enhanced File Transfer Process (FTP) by **40%** (utilized SSIS and replaced the usage of command prompt)

EDUCATION

Northeastern University, Boston Master of Science in Data Analytics Engineering

Jul 2025

Coursework: Data Mining, Gen AI/LLM in Data Engineering, Machine Learning Operations (MLOps)

GPA: 4

SRM Valliammai Engineering College, Chennai Bachelor of Engineering in Electrical and Electronics

April 2014

ACHIEVEMENTS

Received **STAR** award, Interim hikes, Client appreciations for delivery excellence at Cognizant