

ANUSHA UDAYAKUMAR

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Education

University at Buffalo, State University of New York

August 2023 - May 2025

Masters of Science in Engineering Science (Data Science): Grade 3.8/4

Buffalo, New York

Visvesvaraya Technological University

August 2015 - July 2019

Bachelor of Engineering Computer Science: Grade 8.4/10

Karnataka, India

Skills

Languages & Scripting: Python, R, SQL, Java, C++, JavaScript, HTML/CSS, JSON.

Machine Learning & AI: Scikit-Learn, PyTorch, TensorFlow, Keras, XGBoost, Transformers (BERT, GPT).

Data Visualization & Analysis: Pandas, NumPy, Matplotlib, Seaborn, Tableau, Power BI, Excel, DBeaver.

Database & Cloud Platforms: PostgreSQL, MongoDB, Snowflake, Databricks, AWS, Azure, Kubernetes, Docker.

Web Development & Tools: Node.js, Three.js, Flask, GraphQL, VS Code, Git, GitHub, Jenkins, Docker.

Experience

Verusen

May 2024 - August 2024

Data Analyst Research Intern

Atlanta, USA

- Optimized **PostgreSQL** database queries, reducing query execution time by **40%** and efficient data storage.
- Developed **FastAPI**-based **microservices** to enhance real-time data flow and manage multiple simultaneous requests.
- Engineered Python modules to optimize data analysis and visualization for **Exploratory Data Analysis (EDA)**.
- Implemented **OpenAI's GPT-4** for supply chain recommendations, improving response time by **15%** to 3 seconds.

University at Buffalo

Jan 2024 - May 2024

Graduate Student Assistant

New York, USA

- Fine-tuned biomedical data using **XGBoost**, improving classification accuracy by 25% on a 100,000-sample dataset.
- Designed **CNN-LSTM** models for patient outcome prediction, with forecast accuracy by **20%** on time-series health data.
- Automated ETL pipelines with **Pandas** and Spark, reducing data preprocessing time from 4 hours to 2 hours.

Tata Consultancy Services

July 2019 - July 2023

Data Engineer (General Electric Healthcare)

Bangalore, India

- Achieved a **60%** reduction in data extraction costs by optimizing **ETL** processes in a **Snowflake** environment, utilizing **Python**, **SQL** in Teradata, and **Informatica** for efficient data management.
- Facilitated code deployment to production by integrating **Azure** Pipelines with **GitHub**, automating CI/CD processes.
- Boosted data processing efficiency by **37%**, refining mathematical functions in Informatica and pipelines with **Spark**.
- Demonstrated **Agile** expertise in Scrum, driving adaptive planning and digital transformation in data engineering.
- Improved product quality by **49%** through data analytics, visualization in **PowerBI**, **Databricks** for defect analysis.
- Revamped customer satisfaction by **13%** through collaborative tableau data visualization projects, using **Azure's RBAC** for enhanced data security and access control.
- Streamlined metric workflows with SQL **stored procedures**, cutting annual costs by **\$93.9k**.

Projects

Finish Line Forecasters: F1 Data-Driven Foresights | *Python, Scikit-Learn, Real-time Analysis*

November 2023

- Spearheaded a detection system for real-time F1 race data monitoring using Isolation Forest and One-Class SVM.

Sentiment Analysis & Topic Classification System | *Python, TensorFlow, PyTorch, BERT*

October 2023

- Constructed a recommendation system that increased e-commerce engagement by 25% and conversions by 15%.

Cinematic Pulse | *Python, SQLite, Scikit-Learn*

August 2023

- Structured a SQLite database for cinematic data, applied a Random Forest model in Python to predict IMDb ratings.

University Chat Bot | *Python, NLP, Google Dialogflow*

May 2019

- Formulated a cross-platform virtual assistant with Python and Dialogflow, and **published a paper on speech recognition** in the International Journal of Innovative Science and Research Technology.

Leadership / Extracurricular

- Received 'Pinnacle Award' and 'Team Player Award' at TCS for exceptional performance and teamwork.
- Participated in 'Smart India Hackathon 2019' with 15000 participants.