

Akshay Paralikar

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EDUCATION

New York University, New York

GPA 4.0

| Sep 2023 - May 2025

Master of Science, Electrical Engineering.

Relevant Coursework: Deep Learning, Advanced Machine Learning, Advanced Python for Data Science, High Performance ML

Veermata Jijabai Technological Institute, Mumbai, India

GPA 8.11/10

| Aug 2016 - Sep 2020

Bachelor of Technology, Electronics and Telecommunication Engineering

TECHNICAL SKILLS

Programming: Python, R, C, C++, SQL, PySpark, Hadoop, MATLAB, Numpy, Pandas, Scikit-Learn, PyTorch, TensorFlow, CUDA

Data Analytics: SVM, k-means, XGBoost, Hypothesis Testing, A/B Testing, Large Language Modeling, Time Series Analysis

Software Tools: Azure Databricks, Azure Data Factory, Microsoft Excel, GitHub, PowerBI, Tableau, Grafana, Hive, RDBMS

EXPERIENCE

Sensor Engineer: Floodnet, New York City, United States

Apr 2024 - Present

- Created a comprehensive NYC-wide flood sensor health monitoring system for time series data analysis for 200+ IoT flood sensors for a \$7 million city-wide flood sensing initiative. Reduced downtime by 30%
- Devised filters and machine learning models for noise filtering and accurate flood detection improving accuracy by 6%
- Collaborated with cross-disciplinary teams and contributed to product roadmaps for system enhancements

Data Science Consultant: Fractal Analytics, Mumbai, India

Sep 2020 - Jul 2023

- Employed advanced analytics on big data with Python and PySpark on Azure Databricks improving performance by 5%
- Designed ETL pipelines on Azure Data Factory for complete data processing from Ingestion to Reporting resulting in a 15% utilizing Cloud Computing for reduction in overall processing time and enhancing reliability
- Delivered simulation and optimization tools for the client and devised pricing strategies for business results

PROJECTS

Continual Learning for Autonomous Vehicles: New York University.

Jan 2024 - May 2024

- Developed a continual learning system for autonomous vehicle steering control using lifelong learning techniques
- Formulated a novel method of Temporal Consistency Regulation with a balanced buffer to enhance prediction accuracy along with smoothness of drive reducing mean square error by 18% while also reducing memory used by 25%
- Implemented VisualBackProp to visualize the important features from the image that are utilized in predictions

Multimodal Sentiment Analysis: New York University.

Feb 2024 - May 2024

- Designed and evaluated transformer fusion models for multimodal sentiment analysis, combining visual, audio, and text data to derive data insights from large datasets
- Obtained a 75% accuracy on the CMU-MOSI dataset using a Multimodal Transformer (MulT) model
- Conducted a comparative analysis of model performance across different fusion stages and hyperparameters

Complete Market Solution for Fast Moving Consumer Goods: Fractal Analytics.

Nov 2022 - Jul 2023

- Built Machine Learning models for calculating the effects of Innovation of new products into the market, demand transference due to delisting of products, and renovation of products with more than 70% accuracy
- Predicted annual sales of products using Random Forest Regression and Natural Language Processing with 84% accuracy
- Combined with the pricing tool to create interactive dashboards, simulators, and optimizers to visualize the model outputs and calculate forecasts giving product recommendations enabling fact-based decision making

ROI calculation based on Bayesian Belief networks: Fractal Analytics.

Jun 2021 - Dec 2021

- Computed feature impact of different variables like Price, Discount, Advertising, and Seasonality on the sales of products, ascertaining which parameters, directly and indirectly, affect sales using Bayesian Belief Network modeling in R
- Utilized model coefficients to calculate the Return on Investment (ROI) for the advertisement media using statistical methods
- Built multiple tools for investment optimization resulting in a 7% increase in ROI

HONORS AND CERTIFICATIONS

Star Award - Eureka category for developing an innovative solution, *Fractal Analytics*

Aug 2022

Microsoft Certified: Azure Data Engineer Associate

May 2021

Winner AI Hackathon, *Symbiosis Institute of Technology, Pune*

Sep 2019