PARTH KEYUR GAWANDE

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EDUCATION

Master of Science in Information Technology and Analytics ***January 2023-August 2025***

Rochester Institute of Technology, Rochester, New York

Coursework: Database Design and Implementation, Non-Relational Data Management, Visual Analytics, Data-Driven Knowledge Discovery, Time Series Analysis and Forecasting, Information Retrieval, and Text Mining, Data Warehousing.

CGPA: 3.8/4.0

Bachelor of Technology in Computer Science and Engineering ***July 2018-July 2022***

MIT World Peace University, Pune, India

CGPA: 9.27/10.0

WORK EXPERIENCE

Data Analyst | *StandardWings Technologies Pvt. Ltd., India* ***July 2022-December 2022***

- Conducted an analysis of garbage collection vehicle operations for Nashik Municipal Corporation, applying GPS and IoT sensor data to optimize routes, achieving a significant 15% reduction in response times.
- Designed dashboards in Tableau and Power BI, integrating visual analytics and machine learning forecasts for real-time performance monitoring, achieving a 25% reduction in decision-making time and a 15% boost in efficiency.
- Employed time-series analysis and clustering techniques to identify key patterns in vehicle usage, providing actionable insights that led to a notable 20% decrease in fuel consumption through optimized scheduling strategies.
- Collaborated closely with cross-functional teams to merge diverse data from around 120 GPS, RFID-enabled vehicles, and municipal reports, ensuring robust data integrity for enhanced waste management strategies and decision-making.

Data Analytics Intern | *The Sparks Foundation, India* ***December 2021-May 2022***

- Implemented AI technologies in agriculture, increasing crop yield by 12% through real-time analytics and integration of Convolutional Neural Networks (CNN) with IoT sensors for precise monitoring.
- Developed machine learning algorithms using Random Forest and Support Vector Machines (SVM), achieving 91.6% accuracy in crop disease detection, enabling timely interventions and refining resource allocation.
- Analyzed over 5,000 data points with Python and R, employing regression analysis and time series forecasting, revealing trends that reduced water usage by 25% through streamlining irrigation scheduling.
- Coordinated with agronomists to create predictive models with 10+ environmental variables using multiple linear regression, improving crop yield forecasts by 30%.

SKILLS

- **Languages:** Java, C++, Python (NLTK, SpaCy), R (ggplot, dplyr, caret), JavaScript, ReactJS, SQL
- **Database:** MS Excel, MySQL, NoSQL, Neo4J, BigQuery, Hadoop, Apache Spark, SAS, Amazon Redshift, ETL
- **Python:** Numpy, Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, Matplotlib, OpenCV, RegEx, PySpark, Seaborn
- **Tools:** PowerBI, Tableau, Spark, Microsoft Suite, Git, Jupyter, Colab, QGIS, d3.js, Amazon Sagemaker, Azure DevOps

PROJECTS

GeoEnvision: Satellite Image Enhancement and Topography Detection for Urban Planning ***January 2024-May 2024***

- Leveraged Enhanced Deep Super-Resolution and YOLOv3 to enhance satellite imagery, resulting in a 24% increase in image clarity and a Mean Average Precision (mAP) of 89.6% in object detection.
- Directed an extensive analysis of 40,000 Sentinel-2 and 23,000 Landsat-8 images, utilizing advanced preprocessing techniques and evaluation metrics such as PSNR and SSIM to ensure robust model performance.

Smart City Data Warehouse Architecture ***October 2023-December 2023***

- Engineered a centralized data warehouse for smart city initiatives, integrating over 10k records from IoT sensors, traffic management systems, and environmental monitoring, facilitating real-time analysis and insights for urban planning.
- Utilized Apache Kafka for real-time data ingestion and AWS Redshift for data storage, achieving a 50% improvement in query performance and enabling predictive analytics for city resource allocation.

Multimodal Emotion Recognition in Social Media Using LLMs ***May 2023-August 2023***

- Integrated LLMs with computer vision algorithms to create a cohesive understanding of user sentiments, achieving an accuracy of 92% in emotion detection across diverse social media platforms.
- Facilitated a comprehensive analysis of 10k social media posts, leveraging transfer learning for model optimization and achieving significant improvements in predictive performance compared to traditional sentiment analysis methods.

Detection of dyslexia based on eye movements using machine learning (Capstone) ***December 2021-May 2022***

- Drove a pioneering capstone project as a team lead, harnessing machine learning techniques, to develop a novel system for dyslexia detection through reading based on an intricate analysis of over 47 eye movement patterns of subjects.
- Obtaining an exceptional accuracy rate of 91%, this initiative significantly advanced comprehension and bolstered early identification capabilities for dyslexia among children.

RESEARCH PUBLICATIONS

- Presented research on "Video-Based Human Activity Detection" at the 2022 IEEE International Conference, focusing on improving human activity recognition through machine learning and real-time data processing to monitor CCTV cameras
- Published research in the American Journal of Electronics & Communication in 2022, focusing on the relationship between temperature rise, CO2 emissions, and air quality using machine learning techniques.