Aditya Manjunath Naik

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EDUCATION

MS in Engineering Science – Data Science| GPA: 3.83/4 | State University of New York | Aug 2022 – Dec 2023

- **Modules:** Statistics, Machine Learning, Linear Algebra, Probability, Databases, Predictive Analytics

BE in Electronics and Communication | GPA: 7.91/10 | Visveswaraya Technological University | Aug 2016 – Sept 2020

- **Modules:** Python, Control Systems, Analog Electronics, Digital Electronics, Signals and Systems, Digital Image Processing

SKILLS, INTERESTS AND CERTIFICATIONS

Programming Languages: Python (Pandas, NumPy, Scikit Learn, Matplotlib, Seaborn), R Language, MATLAB, C, SQL
Database Management and Security: MySQL, PostgreSQL, Oracle
Cloud Technologies: AWS (RedShift, Lambda, S3), Hadoop, Apache Spark
Visualization Tools: Tableau, Python (Matplotlib, Seaborn), Excel
Analytical Tools: Data Mining, Data Cleaning, Statistical Methods, Predictive Analytics, Data Analysis
Other Skills: Linear Algebra, Machine Learning, Artificial Intelligence, Computer Vision, Mathematical Modelling, Deep Learning, Excel for Data Analysis
Certifications: Basics of R (Harvard University), Business Analytics with Excel (Johns Hopkins University)
Interests: Machine Learning, Artificial Intelligence, Reading, Technological Developments

WORK EXPERIENCE

Research Analyst Intern | State University of New York | Feb 2024 - Present | Buffalo, NY

- Developed a recommendation system using graph embeddings, enhancing relevance and precision.
- Improved system performance by upgrading vectorization approach from bag-of-words to GraphSAGE and Node2Vec, increasing recommendation accuracy by 10%.
- Enhanced recommendation personalization using graph design, resulting in an increase in user engagement.
- Optimized recommendation algorithm, reducing system computational time by 30% and improving processing efficiency.

Student Assistant | State University of New York (SEAS Department) | Aug 2022 - Dec 2023 | Buffalo, NY

- Graded assignments, and projects for 200 students, providing feedback that improved performance by 25%.
- Guided projects on unsupervised learning and time series, ensuring effective theoretical knowledge to application.
- Provided support through sessions, enhancing understanding of statistical techniques and time series analysis.

Programming Intern | VI Solutions (National Instruments) | Jul 2019 - Aug 2019 | Bengaluru, India

- Gained proficiency in graphical programming by working hands-on with National Instruments LabVIEW.
- Acquired expertise in NI myDAQ and LabVIEW, creating functional real-world solutions.
- Implemented a temperature detection system for industrial machines, enabling automated alerts at critical temperature thresholds and improving safety by 40%.

PROJECT EXPERIENCE

Object Detection using YOLOv8 (Car Detection) | Technology Used: Annotations, Ultralytics YOLOv8

- Implemented YOLOv8 nano for object detection, trained and tested on 1000 images, improved accuracy by 15%.
- Evaluated the model over 20 epochs, reducing loss by 30%, demonstrating effective training and improvement.
- Utilized cvat.ai tools to label 1,000+ annotations, converting them to YOLO format for seamless integration.

Generative Pre-Trained Transformer to Generate Text | Technology Used: PyTorch, Transformer Architecture

- Developed a text generator that produces text resembling provided input, improving text coherence and fluency.
- Built GPT algorithms in PyTorch, incorporating self-attention and Adam Optimizer for improved performance.
- Designed a neural network with feedforward and multi-head attention, minimizing evaluation loss by 25%.
- Implemented residual connections and layer normalization to enhance model efficiency and stability during training, which led to 20% improvement in the model.

Sentiment Analysis of Amazon Reviews | Technology Used: Transformers, Hugging Face, NLTK

- Applied sentiment analysis model using Hugging Face's RoBERTa model, achieving a 12% increase in accuracy.
- Utilized NLTK for tokenization and VADER analysis with a bag-of-words approach, identifying limitations like the omission of word relationships.
- Integrated Hugging Face's RoBERTa model, leveraging transformer-based architecture for enhanced performance.
- Evaluated model performance, identifying key areas for optimization and improving accuracy by over 12%.