Melvin J Joseph

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Education

PES University — Bengaluru, India
Bachelor of Technology in Computer Science and Engineering — *Sep. 2021 – May. 2025*
- CGPA: 8.73/10

Deeksha Center For Learning PU College — Bengaluru, India
Pre-University Course — *May. 2019 – Jun. 2021*
- 95.6% in 2nd PU Boards

Experience

Software Engineer Intern — Feb 2025 – Jun 2025
Telstra — *Bengaluru, India*
- Designed and implemented a proof of concept to evaluate Apache Kafka as a replacement for the existing web subscription message broker, improving scalability and real-time data delivery.
- Deployed and tested services on AWS, ensuring reliability, message throughput, and compatibility with existing infrastructure components.
- Contributed to the development of various features in the existing codebase.

Teaching Assistant for Data Structures — Aug 2024 – Dec 2024
PES University — *Bengaluru, India*
- Designed and evaluated diverse lab assessments, enhancing the understanding and application of data structures for over 120 students.

Publications

Sports Video Summarization Using Multi-modal Approach | *Python, Tensorflow* — Feb. 2024 – May. 2025
- Published in the 2025 12th International Conference on Emerging Trends in Engineering & Technology - Signal and Information Processing.
- Integrated audio, video, and textual data to generate enriched football highlights using techniques like YOLO for scoreboard detection, Whisper for audio transcription, and fine-tuned BERT for event classification.
- Achieved high precision and recall by combining modalities, identifying additional key events beyond standard highlights, and leveraging advanced integration algorithms.

Projects

Sentiment-Driven Stock Price Forecasting | *Jupyter, Hugging Face, Keras* — Feb. 2024 – Apr. 2024
- Developed a project focused on leveraging natural language processing (NLP) techniques to analyze sentiments from daily news articles related to Tata Motors. This involved scraping, curating, and annotating a comprehensive dataset comprising both historical stock prices and day-wise news articles
- Applied deep neural network architectures like Long Short Term Memory (LSTM), to predict future stock prices of Tata Motors based on the sentiment analysis of news titles.

Technical Skills

Languages: Python, C, SQL (MySQL, SQLite), MongoDB, HTML/CSS
Frameworks: Tensorflow, Scikit-learn, Keras, Pytorch
Developer Tools/Technologies: Git, Linux, Docker, VS Code, Jupyter, GitHub
Libraries: Pandas, NumPy, Matplotlib, OpenCV, Tensorflow, Scikit-learn, Keras

Awards/ Positions of Responsibilty

Dr. C N Rao Merit Scholarship Award — Jan. 2024
PES University