VARUN D

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SUMMARY

A driven Computer Science and Engineering undergrad passionate about solving complex machine learning challenges. A proactive learner with experience in research and leadership, committed to delivering innovative solutions and contributing effectively in dynamic environments.

EDUCATION

B.E Computer Science Graduating June 2025
Anna University 8.4 CGPA
Madras Institute Of Technology, Chennai

TECHNICAL SKILLS

Programming: Python, SQL, Java, C
Data Visualization & Analytics Tools: Tableau, Microsoft Excel
Development Tools & IDEs: Jupyter Notebook, VS Code, GitHub, StarUML, Figma
Cloud & DevOps: Azure, Docker
Databases: MongoDB, SQL
Operating System: Linux (Basic Commands)
Certifications: IBM Certified Data Science with Python and SQL -February 2024

PROFESSIONAL EXPERIENCE

Auquan, Bengaluru: MLE Intern Jun 2024 – Aug 2024

- Developed Noise Modeling Technique Implemented and fine-tuned noise elimination methods for CJK language models, enhancing data accuracy and model performance.
- Translation Evaluation Framework Created and validated translation evaluation frameworks (Eval 1 using cosine similarity score and Eval 2 based on cosine similarity of extracted numbers) to assess translation accuracy.
- Enhanced NER Entity Matching Leveraged tools like spacy and nuner zero to optimize named entity recognition and resolver entity matching, improving system accuracy in production environments.
- Conducted LLM Testing Performed rigorous testing of large language models (hermes, llama, phi 3) with various slot and context window sizes, contributing to optimization and performance improvements.

Indian Institute of Technology, Indore: Research Intern Jan 2024 – Present

- Working on Predicting population migration in India due to Climatic change by 2040 (Jupyter Notebook, Python)
- Implemented a gravity model and incorporated various Climatic parameters Utilized time series analysis such as ARIMA/SARIMA models to analyze monsoon data and forecast population migration trends (statsmodels)

ACADEMIC PROJECTS

Enhancing Content Moderation and Diversity in LLM Using Hybrid Architectures Feb 2024 - May 2024
Led team of three to design a transformer model for removing offensive language and to improve text diversity.

- Implemented LLAMA2,along with Langchain and Chainlit frameworks, to create a robust solution.
- Integrated BERT embeddings and a hybrid RNN model to remove offensive language, while incorporating N-gram analysis algorithms to enhance text diversity.

Video Streaming Using Multi Path TCP (MTCP) Jun 2023 - Nov 2023
Collaborated in a team to design and develop a Multi-Path TCP (MPTCP) solution for optimized video streaming.

- Implementing MPTCP for video streaming: analyze network, load balancing and subflow management(Linux OS)
- Optimizing bandwidth aggregation and network resilience for seamless viewing experiences. (SDN, Minnet)

CLUB ACTIVITIES

Personality Development Association , MIT: Design Head Jul 2024 - Present

- Led a team of junior designers, providing mentorship and feedback to improve their design skills and ensure consistency across all visual content.
- Designed engaging posters and banners for club events utilizing Canva and Figma.