Satyam Mishra

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Experience

ML Engineer Intern | Al-Zira Technology   **Oct 2024 - Dec 2024**
- Developing and fine tuning LDM (Latent Diffusion Model) and LLM (Large Language Model) for specific use case,
- Safeguarding Large Language Models (LLMs) from prompt jailbreaking, injection attacks, and other adversarial techniques.
- Conducted thorough evaluations of custom LLM outputs using tailored Q&A pairs to assess response accuracy and consistency.

ML Engineer Intern | InnoByte Services   **Sep 2024 - Oct 2024**
- Analyzed customer data from a telecommunications company, including demographics, services subscribed, and churn status, using the Telco Customer Churn dataset, which included over 7,000 customer records.
- We identified a strong positive correlation (~0.65) between TotalCharges and MonthlyCharges, leading to the recommendation to monitor high-spending customers for potential churn risks, reducing the churn rate by 15%.

Technical Content Writer | Nettv4u | Topic research, fact verification, Content Writing   **Nov 2023 - Dec 2023**
- Authored 120+ well-researched, high-engagement articles in two months, spanning topics from entertainment to technology.
- Managed an average workload of 5 articles per day, maintaining productivity and delivering content excellence while consistently meeting tight deadlines.
- Worked 35+ hours weekly, maintaining a high output rate and achieving a 98% on-time delivery record.

EDUCATION

Vellore Institute of Technology, Amaravati

B.TECH in Computer Science and Engineering (AI and ML)

GPA: 8.24 | Nov 2021-May 2025

CERTIFICATIONS

Google Cloud Digital Leader (Foundation Certificates)

SKILLS

Programming Languages: Java, Python, Javascript
Web Technologies and frameworks: React.js, Next.js, Flask, FastAPI
Databases: SQL, Firebase
Cloud Platforms: Google Cloud
Tools: Vs Code, Git. Github, Figma, Docker
AI/ML Libraries: Pandas, Matplotlib, Scikit-Learn, Pytorch, Transformers (basic), Prompt Engineering, LLM evaluation
Soft Skills: Flexible, Continuous learning, People handling, Listener, Open-mindedness
Spoken Languages: English (proficient), Hindi (proficient)

PROJECTS

PATENT - CLASSIFICATION OF LUNG CANCER USING DEEP LEARNING TECHNIQUES
Tech Stack: YOLOv8, Image classification, Fine-tuning
- Engineered a lung cancer detection model leveraging YOLOv8 deep learning architecture, achieving an 83.8% top-1 accuracy rate by training on a publicly available dataset of over 5,000 images of lung scans.
- Achieved a top-1 accuracy of 83.8% and a top-5 accuracy of 96.4% in distinguishing between patients with and without lung cancer.

ConvoGen AI (Conversation LLM)
Tech Stack: Python, Transformer, T5 model
- ConvoGen, a personalised chatbot leveraging natural language processing (NLP) models, simulating over 500 lifelike conversations tailored to individual user preferences, interests, and personalities.
- Engineered the chatbot using advanced NLP models, increasing user engagement by 35% and improving conversational accuracy to 90%.
- Trained the model over 200 epochs, achieving a minimal training loss of 0.0080, ensuring high accuracy and natural flow in responses.

Image Captioning Web App
Tech Stack: Image Recognition, CNN, LSTM, HTML, CSS
- Integrated Convolutional Neural Networks (CNN) for image feature extraction and Long Short-Term Memory (LSTM) networks to generate descriptive captions with 85% accuracy on a dataset of 10,000 images.
- Optimized the system's performance, reducing caption generation time by 30%.
- With a BLEU-1 score of 0.543 and a BLEU-2 score of 0.314, demonstrating high accuracy in generating contextually relevant captions.
- Practical applications, including automatic image labelling and assistive technologies for the visually impaired.