Koushik murali

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SUMMARY

AI and Data Science enthusiast focused on building real-world machine learning solutions. Experienced in deep learning, computer vision, and NLP, with projects spanning deepfake detection to automated code correction. Skilled in PyTorch, Streamlit, and Hugging Face, and passionate about solving complex problems through AI innovation.

B.Tech Computer Science & Business Systems	**2023 - 2027**
Rajalakshmi Institute of Technology	Chennai
Higher secondary	**2021-2023**
S.M.J.V Higher secondary school	Chennai

WORK EXPERIENCE

AI Intern	**Oct 2025 – Present**
Plugzmart	Chennai

- Fine-tuned and deployed machine learning models on cloud environments for live EMS applications.
- Researched and compared forecasting methods (ARIMA, LSTM, Prophet) to improve load prediction.
- Processed and cleaned real-time IoT sensor data from smart meters using Pandas, NumPy, and PySpark for training and evaluation.
- Evaluated model performance using SMAPE, RMSE, and R^2 metrics to optimize energy demand forecasts

AI Research Intern	**Dec 2024 – Feb 2025**
Edunet foundation	Benguluru (remote)

- Developed a machine learning model to predict user health risks using classification techniques.
- Created automated data pipelines with Pandas and visualized performance metrics using Seaborn.
- Presented model results and insights to project stakeholders during weekly demos.

PROJECTS

Deepfake Detection System| PyTorch, Streamlit, OpenCV, EfficientNet-B0   **Aug 2025**

- Developed a real-time deepfake detection system achieving 89.38% validation accuracy using EfficientNet-B0.
- Implemented dual-mode inference: image-based detection and frame-by-frame video classification with temporal smoothing.
- Built and deployed an interactive Streamlit web app with drag-and-drop support for both images and videos.
- Integrated visual outputs such as confidence graphs, probability distribution, and verdict summaries.

Bug Detection and Fixing (Intel Unnati 2025) | LLaMA 3.1 8B, LoRA, QLoRA, Hugging Face   **May 2025**
- Fine-tuned LLaMA 3.1 8B using LoRA/QLoRA on multilingual buggy/fixed code datasets (Python, Java, JS, Rust, Go).
- Created Gradio-based deployment on Hugging Face Spaces for real-time bug detection and code correction.
- Documented training and deployment pipelines with reproducible Jupyter notebooks and datasets.

TECHNICAL SKILLS

Languages | Python, JavaScript, Sql, Java
Frameworks | TensorFLow, PyTorch, Scikit-Learn, Flask, keras, Langchain
Developer Tools | Git, Docker, Docker, Visual Studio Code, PyCharm, SSH, Eclipse, GitHub
Libraries | Pandas, NumPy, Matplotlib, Bootstrap, Seaborn
Others | Microsoft Excel, Power BI, AWS