

Leander Francis Fernandes

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SUMMARY

AI Application Engineer and Full-Stack Developer building LLM, NLP, and computer-vision systems using Python, FastAPI, and React. Implemented prompt engineering, vector-based semantic search, and REST APIs, achieving measurable improvements in accuracy, latency, and automation.

TECHNICAL SKILLS

Frontend: React.js, Tailwind CSS, HTML5, CSS3, JavaScript (ES6+)

Backend: Node.js, Express.js, Flask, FastAPI

Databases: MongoDB, MySQL, Firebase

APIs and Authentication: REST APIs, JWT

DevOps and Deployment: Render, Vercel, Docker, GitHub Actions (CI/CD)

Programming and Data: Python, Pandas, NumPy, Scikit-learn

Visualization: Tableau, Power BI

EXPERIENCE

Data Analyst Intern | IBM SkillsBuild

Jun 2023 to Jul 2023

- Processed and analyzed datasets exceeding 100 K rows using **SQL** and **Python (Pandas, NumPy)** to improve data accuracy by 30%.
- Designed interactive **Tableau dashboards** to visualize key business metrics, reducing manual reporting time by 40%.
- Automated data-cleaning pipelines using **Python scripting**, increasing analysis speed by 25%.

PROJECTS

LLM Playground | Full-Stack AI Application

Dec 2025

- Built a full-stack **LLM testing application** using **FastAPI** and **React.js** with **Google Gemini API** integration.
- Added Markdown rendering, streamed responses, and copy-to-clipboard utilities to reduce manual text handling by 60%.
- Deployed backend on **Render** and frontend on **Vercel** using environment variables for API key isolation.

Tech Stack: FastAPI, Python, Google Gemini API, React, Tailwind CSS, Render, Vercel

AI-Powered Legal Intelligence System | NLP + Full-Stack Development

May 2025

- Implemented **NLP pipelines** and semantic search workflows using **Python, Flask, React**, and deep-learning frameworks.
- Built a legal document analysis system achieving **95% IPC prediction accuracy** and **92% case-retrieval precision**.
- Integrated **SentenceTransformer embeddings** with **ChromaDB** for Retrieval-Augmented Generation (RAG) and API serving.

Tech Stack: Python, SentenceTransformer (NLP), ChromaDB, Gemini API, React.js, Streamlit, PyPDF2, NLTK

Drowsiness Detection System | Real-Time Computer Vision Application

May 2024

- Implemented an eye-state detection pipeline using **OpenCV, dlib**, and **Flask**, achieving **92% accuracy** with sub-100 ms latency.
- Built a **React** frontend to stream 30 FPS video frames and visualize alerts in real time.
- Added rule-based alarm thresholds and adaptive calibration for low-light conditions.

Tech Stack: Python, OpenCV, dlib, Flask, React.js, NumPy, Computer Vision, Real-Time Video Processing

CERTIFICATIONS

AI & Machine Learning (Vishlesan i-Hub, IIT Patna)

Jan 2026 – Present

Currently pursuing 9-month intensive track in Generative AI & Deep Learning.

Other: React Training (Internshala) | IBM SkillsBuild (Data Analytics) | Node.js (UpGrad)

EDUCATION

Vidyavardhini's College of Engineering and Technology (VCET), Vasai

Dec 2021 to May 2025

Bachelor of Engineering in Computer Engineering

CGPA 7.14

Holy Family Convent Jr. College, Vasai

Jul 2019 to May 2021

Higher Secondary Certificate (Science)

Percentage 90%