LAKSHMAN SHANMUGAM

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ACADEMIC QUALIFICATION

Bachelor of Technology in Electronics and Computer Engineering,　　　　　**CGPA: 8.44 / 10**

Vellore Institute of Technology (VIT) University, Chennai, 2024, (Till 7th semester)

INDUSTRIAL EXPERIENCE

Generative AI Developer Intern, True Info Labs Pvt, Chennai　　　　**June 2024 – September 2024**

- Extracted frames, transcripts, and translations from YouTube videos for a media project and used real-time Audio Processing with CUDA, storing data in MongoDB.
- Automated metadata extraction and analysis for Deccan Herald newspaper articles.
- Analysed Tamil Nadu voter list using OpenAI and Google Vision, extracting district and constituency details.
- Built backend for a news summarization website using Bubble and integrated OpenAI and Claude APIs.

Data Science Intern, Bharat Intern, Chennai (Remote)　　　　**December 2023 – January 2024**

- Built an SMS classifier using NLP techniques for spam detection, focusing on text preprocessing, feature extraction, and model evaluation.
- Applied machine learning algorithms on the Kaggle Titanic dataset to predict passenger survival, enhancing model accuracy through feature engineering and tuning.

Flutter Developer Intern, Thiran Technologies Pvt, Chennai　　　　**August 2023 – November 2023**

- Developed and deployed mobile applications for Android and iOS using Flutter, including a Registration App, Scientific Calculator, and WhatsApp Interface Model.
- Integrated RESTful APIs to enable real-time data fetching and seamless communication between app front-end and backend services.

KEY ACADEMIC PROJECTS

Sleep Apnea Detection with EEG Signals Using ML model, VIT University, Chennai, Nov 2024 (Team size: 3)
Responsibility: Developed 2 machine learning model to detect sleep apnea using EEG data from Physionet and compare the results, achieving 63% and 60% accuracy with Random Forest and XGBoost classifiers respectively.

Conversational Chatbot with Sentiment Analysis - GEMBOT, VIT University, Chennai, Nov 2024 (Team size: 3)
Responsibility: Developed a general conversational chatbot using Google Gemini 1.5 Pro API, integrated with an LSTM-based sentiment analysis model to classify user emotions (e.g., joy, anger, sadness) and calculate emotion percentages. Implemented a MongoDB database to store user input messages and corresponding sentiment data for real-time tracking and analysis. The chatbot efficiently processes conversational queries, providing both responses and emotional insights, with a focus on improving human-chatbot interaction quality.

Air Pollution Analysis Using Data Analytics, VIT University, Chennai, Nov 2022 (Team size: 3)
Responsibility: Analyzed air pollution data from 15 Indian cities using python and performed Exploratory Data analysis, visualizing pollutant levels (CO, NO2, O3, PM2.5). Developed predictive models to forecast pollution trends, assessed gas-specific impacts, and proposed solutions to aid policymakers in mitigation strategies

ON-GOING RESEARCH:

- **Stock Market Prediction using LSTM**

- **Bone Fracture Detection using Yolo, Faster RCNN and RESNET50**

- **Explainable Lung Diseases Detection using Deep Learning with Recommender System**

EXTENDED RESPONSIBILITIES

- **Student Partner, 'Internshala'** – Motivated students to enroll in online Internshala Trainings, promoting career development. Spearheaded Internshala campaign promotions in the college, assisting students in finding internships and jobs. Participated in social media branding initiatives, learning effective online brand communication, Jun 2024 – Aug 2024

- **Technical member, 'VIT Android Club'** – Taught juniors the fundamentals of Android development, fostering a collaborative learning environment. Facilitated joint events between the Android Club and AI Club to demonstrate the synergy between mobile app development and AI technologies. Led a team of four to successfully build a registration app project, showcasing leadership and project management skills, Feb 2023 – Jan 2024

- **Event Organizer, 'The Grove School'** – Collaborated with school alumni to assist teachers in successfully organizing the Tamil Nadu State Level Athletics Meet for ICSE and ISC schools – Aug 2024

CERTIFICATIONS

- Udemy Machine Learning A-Z: AI, Python & R – Jun 2024
- IIT Bombay C, C++, and Python Training/Test – Feb 2022
- Uniathena Diploma in Artificial Intelligence – Oct 2024
- Accenture Data analytics Virtual Experience Program – Sep 2024

TECHNICAL SKILLS

- Programming Languages: Java, C/C++, Flutter, HTML, R, CSS, JavaScript (React JS,Node JS), PHP, XML, Go
- Data Analytics: Python (Scikit-learn, TensorFlow, NLTK, Keras, Pandas, PyTorch), mySQL, BigQuery, PostgreSQL, Tableau, Power BI
- Machine Learning: Predictive Analytics, Deep Learning, Natural Language Processing, Statistical Modeling and Computer Vision
- Cloud Platforms: AWS, Azure Services

AWARDS AND ACHIEVEMENTS

- Accepted as a Student Partner by Internshala - 2024
- Achieved Black Belt 1st Dan in Karate
- Accepted into the GDC workflow – 2024