Pratap Subramani

VIT-AP University, Amaravati, Andhra Pradesh

📱 +91 9789122679 ● ✉ pratapsubramani@gmail.com

⬚ pratap834   in Pratap S   </> Pratap834

Summary

Machine Learning Engineer skilled in designing data pipelines, developing and optimizing ML/DL models, and deploying end-to-end AI/GenAI solutions. Proficient in Python, R, SQL, and major ML frameworks, with strong interest in distributed systems and scalable inference infrastructure.

Education

VIT-AP University   **Amaravati, Andhra Pradesh**
Bachelor of Technology in Computer Science and Engineering (AI & ML)   *2022–2026*

Sri Vijay Vidyashram
Class 12 | 93%   *2021–2022*

The Titan School
Class 10 | 91.5%   *2019–2020*

Skills

Programming Languages: Python, R, Java, JavaScript

Libraries & Frameworks: PyTorch, TensorFlow, Hugging Face Transformers, Scikit-Learn, Pandas, NumPy, Flask

Tools: SQL, Git, GitHub, n8n, Next.js, Neon database, Clerk Auth, Linux, Figma

Languages: English (Proficient), Hindi (Familiar), German (Familiar), Tamil (Proficient)

Professional Experience

Titan Company Ltd   **Bengaluru**
SDE Intern   *Jun–Jul 2024*
- Improved SQL query performance and reporting precision for Tanishq Jewelry's data systems by identifying and resolving bottlenecks.
- Built a Python-based store locator data pipeline, replacing time-consuming manual lookup with automated data extraction.
- Authored Business Requirements and Technical Specification Documents for a limit automation initiative, aligning output with analyst expectations.
- Collaborated with business analysts to document workflows, schema mappings, and process automations for technical reporting.
- Contributed to internal ML research on Vision Transformers and CNNs, focusing on scalable inference strategies for analytics solutions.

Playlit 🔗   **Remote**
Full Stack Developer (Freelance)   *2025–Present*
- Designed a data-centric music platform with authentication, artist analytics, and structured content uploads.
- Developed role-based dashboards to support internal performance monitoring and management.
- Designed and managed a waitlist system that captures user interaction metrics from more than **400+ users**.
- Architected scalable back-end infrastructure for reliable data handling and user behavior tracking.
- **Tech Stack:** Next.js, Neon DB, Clerk Auth, Cloudinary

Projects

Hybrid CNN-Transformer for Skin Texture Analysis:
- Implemented a Hybrid CNN-Transformer architecture to analyze and classify skin textures with improved accuracy.
- Applied data preprocessing techniques including normalization and augmentation to improve generalization.
- Designed and trained the hybrid deep neural architecture combining convolutional layers for local features and transformer blocks for global context.
- Evaluated performance using accuracy and loss metrics; achieved **82% test accuracy**.
- **Tech Stack:** Python, TensorFlow/Keras, NumPy, Matplotlib

Career Guidance Chatbot:
- Built a recommendation system for career suggestions using structured user profiling and data persistence mechanisms.
- Developed back-end using Flask and SQLAlchemy; managed analytics using AWS Lambda for performance reporting.
- Integrated Gemini API to enhance LLM-based intent understanding and improve recommendation accuracy.
- **Tech Stack:** Python Flask, SQLAlchemy, Gemini API, AWS Lambda, AWS EC2

AI-Powered Sentiment Analysis Platform:
- Deployed sentiment models combining lexicon and transformer-based methods for scalable, real-time insights from web reviews.
- Automated real-time web scraping to collect datasets and support competitor analysis.
- Created interactive dashboards with trend visualizations for decision-making.
- **Tech Stack:** Hugging Face Transformers, VADER, Beautiful Soup, Scrapy, RapidAPI, Chart.js

Trip Planner & Blog Creator :
- Developed an LLM-powered itinerary generator with mapping and storytelling modules, integrating multi-source data for user personalization.
- Enabled structured export of itineraries as PDFs for enhanced user experience and offline access.
- **Tech Stack:** Gemini API, Python Flask, Google Maps API, FPDF, OpenAI API

Activities

NULL Chapter	**Vijayawada**
Technical Team Lead	*2023–Present*

- Designed Capture the Flag (CTF) problems focused on reverse engineering and data handling for technical competitions.
- Facilitated workshops on data security, analytics, and vulnerability assessment.
- Mentored members in structured problem-solving and investigative analysis techniques.

NextGen Cloud	
Tech Python Co-Lead	*2023–2024*

- Built an e-commerce system emphasizing transactional data flow and user data management.
- Provided hands-on sessions on back-end analytics, performance debugging, and query optimization.

Machine Learning Club	
Content Team Member	*2022–2023*

- Participated in data preprocessing, model evaluation, and reporting accuracy for ML-based student projects.
- Organized peer review sessions to improve analytical approaches and data storytelling.

Certifications

Oracle Cloud Infrastructure 2025 Certified Generative AI Professional:

Improving Accuracy of LLM Applications: deeplearning.ai

LangChain for LLM Application Development: deeplearning.ai

Oracle Cloud Infrastructure 2025 Certified Data Science Professional:

AWS Cloud Foundations (Cloud Practitioner Badge):

AWS Cloud Architecting:

IIRS Geo-data Analysis using AI/ML: ISRO