ETIKALA VIGNESH

Python Backend Developer

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SUMMARY

Python Backend Developer and AI/ML Engineer with 2+ years of experience building APIs with FastAPI, deploying cloud solutions on AWS, and developing data-driven applications. Skilled in SQL, backend architecture, CI/CD, and machine learning workflows. Hands-on exposure to LLM and OpenAI-based systems for chatbot validation and automation. Strong ability to deliver production-ready software solutions aligned with business needs.

EDUCATION

B.TECH - CSE

University College Of Engineering, Osmania University | GPA 8.5 / 10

06/2019 - 05/2023

Intermediate - MPC

Sri Chaitanya Junior College | GPA 9.0 / 10

05/2017 - 04/2019

Tenth - SSC

Vidya Kiran High School | GPA 9.0 / 10

02/2008 - 04/2017

SKILLS

Programming Languages

Python, SQL, XSLT

Backend Development

FastAPI, REST APIs, API Design, Backend Architecture

Cloud & DevOps

AWS (Lambda, SES, EventBridge Scheduler), CI/CD, GitHub Actions, PyTest

Machine Learning & Data Science

NumPy, Pandas, Scikit-learn, Feature Engineering, Feature Selection, Supervised Learning (Regression, Classification), Ensemble Methods (Random Forest, XGBoost, LightGBM, CatBoost), Model Evaluation & Performance Metrics, Cross-Validation, Hyperparameter Tuning (Grid Search, Random Search), Exploratory Data Analysis (EDA), Data Cleaning, Data Preprocessing

Statistics

Statistical Analysis, Hypothesis Testing

AI & LLM

OpenAI, LLM Workflows, Chatbot Validation, Automation Pipelines

Tools & Platforms

Git, Jupyter Notebook, Visual Studio Code, Excel

EXPERIENCE

Backend Developer, AI/ML Engineer

Socrates Labs

09/2023 - Present

• Won 3 internal hackathons conducted within the company.

• Implemented automated fraud email reporting using AWS Lambda, SES, and EventBridge Scheduler, delivering daily fraud reports to clients.

• Worked on machine learning model development and integration with backend systems.

• Developed multiple backend APIs using FastAPI.

• Implemented CI/CD pipelines using GitHub Actions for automated testing and deployment.

PROJECTS

Worked on Multiple Backend Projects

• Developed a backend service to update ID verification status in PostgreSQL based on user approval and rejection actions.

• Implemented bulk update functionality to mark applications as fraud / not fraud from the UI, with status updates stored in PostgreSQL.

• Integrated email status tracking by updating the database when emails were triggered from the UI.

• Designed and implemented Global and Internal usage metrics to track IP, Email, Phone Number, Address, and SSN activity across institutions and time periods for fraud pattern detection.

Course Grade Prediction - Team Lead

• Designed and developed a machine learning pipeline using CatBoost for student grade prediction, performing extensive preprocessing, feature engineering, train–test splitting, and cross-validation with hyperparameter tuning to maximize model performance.

• Built a high-performing grade prediction model achieving over 85% accuracy, enabling early identification of at-risk students and supporting data-driven academic decisions.

Student Retention Prediction

• Built a machine learning model to predict student retention risk levels using academic history, enrollment patterns, and performance indicators. Performed data cleaning, feature engineering, and model training using CatBoost with proper preprocessing and validation.

• Developed a student retention-risk prediction model with ~90% validation accuracy, enabling early detection of high-risk students and improving data-driven academic intervention decisions.

IDOLOGY Verification

• Designed and implemented a Vue + PrimeVue ID verification interface with document upload and live selfie capture. Enabled real-time face detection, blur/brightness checks, and multi-face prevention through face-api.js, and seamlessly integrated the front-end workflow with IDology API endpoints to streamline verification.

• Delivered a reliable, user-friendly verification UI that automated the ID capture process, ensured high-quality biometric inputs, and successfully transmitted validated data to backend services for fraud-status updates.

Response Validation in LightLeap Chatbot - Team Lead

• Validating responses in the Light Leap chatbot by comparing API outputs using Selenium and OpenAI, and testing the chatbot's structural components through Selenium-based automation.

• Implemented a new feature in the Light Leap chatbot to automatically generate questions.

• Selected and integrated appropriate automation tools to process the generated questions.

• Validated Light Leap chatbot responses by comparing them with corresponding API outputs using OpenAI.

• Captured and recorded all validation results in a structured, standardized CSV format.

CERTIFICATIONS

Python Programming – Next Wave
Data Science Certification – Udemy

KEY ACHIEVEMENTS

Championship Achievement

Secured the championship title in the SportMania event clinching the overall cup in Osmania University

Leadership in Sports Event

Led the coordination of the SportsMania tournament for CSE department as the designated organizer at the college

Chess Championship

Won the Chess Championship at Osmania University and Socrates Labs

STRENGTHS

• Self Motivated

• Hard-Working

• Quick Learner