VIVEK POL

+91 9422121962 polvivek77@gmail.com LinkedIn Mumbai

PROFILE SUMMARY

AI/ML Full-Stack Developer with 6+ years of experience in developing end-to-end data and AI solutions. Skilled in Machine Learning, Deep Learning, NLP, and Generative AI with hands-on expertise in Python, statistical analysis, financial and business data processing, and scalable model deployment. Strong background in financial domain workflows, RAG, PDF/Document extraction, data pipelines, cloud deployment (AWS), and building decision-support analytics dashboards. Proven ability to collaborate with cross-functional teams, automate manual processes, and deliver measurable business impact.

Open Source Contribution And Community Links: Portfolio Website | YouTube | GitHub | LeetCode | HackerRank

SKILLS

PROGRAMMING & SCRIPTING: Python, FastAPI, Flutter, Dart, SQL, JavaScript, HTML, CSS
DATA SCIENCE & ANALYTICS: Pandas, NumPy, SciPy, Scikit-Learn, Statsmodels, Pyspark, Dask, Time Series Analysis, Demand Forecasting, Feature Engineering, Web Scraping (BeautifulSoup/Selenium/Pdfplumber)
MACHINE LEARNING & DEEP LEARNING: TensorFlow, Keras, PyTorch, XGBoost, LightGBM, CatBoost, Model Training & Evaluation, Hyperparameter Tuning, MLOps (MLflow / DVC)
GEN AI & NLP & AGENTIC AI: Generative AI, AI Agents, Agentic AI Workflows, RAG Pipelines, LLM Fine-Tuning, Prompt Engineering, Transformers, LangChain, HuggingFace, DeepSeek API, Sentence-Transformers, NLTK, SpaCy, Gensim, Vector Databases (FAISS, Pinecone, ChromaDB, Weaviate, Milvus), n8n, CrewAI, Ollama, LLM Wrapper, OpenClaw, LLM Evaluation, RAGAS
COMPUTER VISION: OpenCV, Pillow, TorchVision, MediaPipe, Ultralytics (YOLO), Detectron2
DATA ENGINEERING & DATABASES: PostgreSQL, MongoDB, SQLAlchemy, PyMongo, MySQL, Kafka, Sqlite
DOCUMENT & PDF PROCESSING: pdfplumber, pypdf (PyPDF2), pdfminer.six, PyMuPDF (fitz), Camelot, Tabula-py, Tika, Textract, pytesseract, EasyOCR
DATA VISUALIZATION & BI: Matplotlib, Seaborn, Plotly, Power BI, Tableau
BACK-END & APP DEVELOPMENT: FastAPI, Flask, Streamlit, Gradio
CLOUD, DEPLOYMENT & CI/CD: AWS (EC2, Lightsail), AWS Bedrock, Docker, Kubernetes, Helm, GitHub Actions, Terraform, Jenkins, Ansible, Maven, Chef, Linux, Keycloak Authentication, Razorpay Payment Gateway
MISCELLANEOUS TOOLS: Microsoft Excel, Word, PowerPoint, Outlook, Teams

EXPERIENCE

ValueAdd Research & Analysis Solutions LLP - Python Developer

Jan 2025 - Present

Conversational AI Talk2Data Project:

- Built a conversational advance RAG agentic AI system that interacts with files and databases (MySQL, Excel, PDF, TXT) using NL2SQL and RAG. Implemented full CI/CD with Keycloak authentication, Razorpay payments, and automated deployments via Jenkins, Terraform, AWS, Docker, and Git. Integrated Anthropic Opus 4.5 LLM with FastAPI/Node.js microservices, using Kafka and MongoDB to support 100+ subscribers. Technologies: NL2SQL, RAG, FastAPI, Node.js, Kafka, MongoDB, Keycloak, Razorpay, Jenkins, Terraform, AWS, Docker, Git.

Resume Scanner CVPerfect Project:

- Developed an AI-powered resume screening system that automates candidate evaluation, ranks resumes against job descriptions, and extracts key profile data. Integrated DeepSeek API to reduce HR screening time and cost by 90%, with built-in database CRUD operations for efficient profile management.
  Technologies: LangChain Agents, Tool Calling, Search API, LLM Reasoning, DeepSeek API.

LIC INDIA - Development Officer | Central Government Class 2 Officer With AIR 120

July 2023 - Sept 2024

Fraud Detection System:

- Built an ML model for fraud detection using feature engineering, hyperparameter tuning, and cross-validation to maximize accuracy and recall.
  Technologies: Python, Machine Learning, Power BI, Matplotlib, Scipy

Insurance Premium Prediction :

- Developed and deployed an ML model for personalized insurance premium prediction and automated calculations to enhance user experience and reduce manual effort.
  Technologies: Machine Learning, SQL, Pandas, Numpy, Scikit-Learn, LSTM

Loan Default Prediction System:

- Trained classification models to predict default probability and automated model explainability reports for stakeholders.
- Technologies: Pandas, Logistic Regression, Random Forest, SHAP, Flask

Multi-Agent Workflow for Document Analysis:

- Developed a multi-agent pipeline where one agent extracts tables, another interprets metrics, and a third creates a decision summary.
- Technologies: CrewAI / LangChain Multi-Agent, Pandas, pdfplumber, ChromaDB

Capstone Securities Analysis Pvt. Ltd. Pune - Data Scientist

Nov 2019 - Nov 2021

Stock Price Prediction Using Machine Learning:

- Build a model to predict the future stock prices of listed companies using historical data and various factors that influence stock price movements.
- Technologies: Python with Flask, BeautifulSoup for scraping news

Credit Risk Scoring Model:

- Built a scoring model to assess borrower creditworthiness using historical financial & transactional data, improving risk-based decisioning.
- Technologies: Python, Scikit-Learn, XGBoost, SHAP, Power BI

Email Intent Classification & Auto-Reply Generator:

- Created an NLP pipeline that classifies inbound emails and generates professional auto-responses to reduce manual workload.
- Technologies: Transformers, Sentence Transformers, Flask, Streamlit

Customer Support Multi-Agent System:

- Implemented a multi-agent system where one agent classifies the user query, another retrieves knowledge from internal documents, third agent generates the final response
- Technologies: LangGraph / CrewAI, VectorDB (FAISS/Chroma), FastAPI, React UI

Oriental Rubber Industries Pvt. Ltd. Pune - Trainee Engineer

Jul 2019 - Nov 2019

Smart Conveyor Belt Condition Monitoring System:

- Build an IoT-based system to monitor the health and performance of conveyor belts used in rubber manufacturing plants by collecting real-time sensor data (temperature, vibration, motor current) and predicting potential failures to reduce downtime.
- Technologies: Python, Flask, Arduino, Vibration Sensor, Temperature Sensor, Pandas, Matplotlib

Predictive Maintenance System for Industrial Rubber Machinery:

- Develop a predictive maintenance solution that uses IoT sensor data from rubber processing machines (mixers, rollers, presses) to analyze usage patterns and predict maintenance requirements before breakdowns occur.
- Technologies: Python, Scikit-learn, IoT Sensors (Current, RPM, Temperature), SQLite, Pandas

Volkswagen Pvt. Ltd. Pune - Data Analyst

Oct 2018 - Apr 2019

Customer Churn Prediction Model:

- Designed an ML model to predict customer churn probability using feature engineering, classification algorithms, and model evaluation techniques.
- Technologies: Python, Scikit-Learn, XGBoost, Pandas, Matplotlib

Supply Chain Optimization:

- Improved Volkswagen's inventory management and reduce supply chain costs.
- Technologies: Power BI for dashboards.

Vehicle Number Plate Recognition System:

- Developed a real-time automatic number plate recognition (ANPR) system to detect vehicles and extract plate text using OCR for traffic monitoring automation.
- Technologies: Python, OpenCV, YOLOv8, EasyOCR, Streamlit

EDUCATION

June 2013 - June 2017

B.E.MechanicalEngineering | First Class 62.26%
P.E.S.ModernCollegeOfEngineeringPune | SSC92.36% | HSC 69.16%

CERTIFIED COURSES AND ACHIEVEMENTS

Certified Courses: Generative Artificial Intelligence from Udemy, Full Stack Data Science from CodeWithHarry.
Personal Achievement: All India Rank 120 in the Central Government Class - 2 Officer LIC ADO Competitive Exam, 2023.
