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Pankaj S Ligade

Software Engineer

SUMMARY

Experienced IT professional with over 6 years in the industry, currently working as an LLM Engineer at United Layes since January 2025. Specialized in Python, Django, and chatbot development using ChatGPT and other LLM technologies. Proven expertise in building intelligent conversational systems and scalable backend solutions. Previously served as Application Owner for the NPA Project, showcasing strong leadership and end-to-end project ownership. Looking to contribute technical acumen and innovation in AI-driven product development and backend engineering.

KEY SKILLS

• Python Development • Django Framework • Chatbot Development • Large Language Models (LLMs) • OpenAI / ChatGPT Integration • Backend Engineering • API Development • Prompt Engineering • Data Analysis • Automation • Problem Solving • Application Ownership • Project Management • Agile Methodologies • Leadership • Adaptability • Active Learning • Testing & Debugging • Report Generation • MIS • Banking Domain

TECHNICAL SKILLS

• **Programming Languages:** Python, SQL
• **Data Analysis & Machine Learning:** NumPy, Pandas, Scikit-learn, Model Evaluation
• **Web Development:** Django, HTML, CSS, Bootstrap, Jinja2, DTL
• **Data Visualization:** Power BI, Tableau, Matplotlib, Seaborn, Streamlit, Apache Superset
• **Databases:** MS SQL, MySQL, Oracle, SQLite, Presto DB (via DBeaver), Amazon RDS
• **Cloud Platforms:** AWS (EC2, S3, RDS, Lambda, CodeCommit)
• **Data Engineering:** Apache Airflow, PySpark, SSIS, Kafka
• **DevOps & Tools:** Git, GitHub, VS Code, PyCharm, Jupyter Lab, Jira
• **Operating Systems:** Linux/Ubuntu, Debian, Shell Scripting, SSH
• **IoT Development:** Raspberry Pi 5
• **APIs:** RESTful API Development & Integration

PROFESSIONAL EXPERIENCE

Python Developer   Jan '25 - Present

United Layers Pvt Ltd   Mumbai

Job Responsibilities for Chatbot Development Project at United Layes:

1. Chatbot Development and LLM Integration:Designed and developed intelligent chatbot solutions using Python and Django frameworks.
- Integrated OpenAI's ChatGPT and other LLM APIs for dynamic user interactions and conversational workflows.
-Implemented prompt engineering strategies for task-specific responses and contextual understanding.

2. Backend Issue Handling and System Maintenance:
- Handled backend-related issues including API failures, performance bottlenecks, and database inconsistencies.
- Debugged Django-based backend services and ensured high system uptime and smooth user experience.
- Monitored and maintained server logs, optimized API response times, and resolved production bugs.

3.Cloud Infrastructure Collaboration (Public and Private Cloud):
- Worked with both public and private cloud infrastructure teams for deploying chatbot services.
- Managed services on AWS (including S3, RDS, Lambda) and coordinated with internal teams for secure deployments on private cloud.
- Handled access management, environment configurations, and cloud resource optimization.

4. API Development and Integration:
- Developed RESTful APIs to support chatbot workflows and integrations with third-party systems.
- Ensured secure API authentication, authorization, and data validation across services.

5. Agile Collaboration and Cross-Team Communication:
- Participated in sprint planning, daily standups, and retrospectives to coordinate deliverables.
- Collaborated with product managers, frontend developers, and QA teams for seamless project execution.

6. Testing and Quality Assurance:
- Performed unit testing and integration testing on chatbot components and backend services.
Ensured code reliability and maintained consistency using Git version control and collaborative review processes.

7. Documentation and Knowledge Sharing:

- Documented chatbot architecture, API flows, and deployment processes for internal use.
- Conducted training and walkthroughs for team members on LLM usage, Django development, and chatbot enhancement strategies.

Software Engineer at Clover Infotech Pvt. Ltd.

Feb '23 – Jan '25

Client - SBM Bank Pvt. Ltd

Mumbai

Job Responsibilities for NPA Automation and management Project:

1. Development, job Monitoring, Scheduling, and End-of-Day (EOD) Process:
- Monitor and schedule tasks within the NPA Project, ensuring timely execution.
- Manage End-of-Day processes using MS-SQL database and SSIS for integration, ensuring data integrity and completeness.

2. User Acceptance Testing (UAT) and Production Environment Testing:
- Conduct UAT and production environment testing, adhering to RBI IRAC norms.
- Designed scenarios and dummy data for testing on MS-SQL, ensuring compliance with regulatory requirements.

3. User and Stakeholder Observations and Troubleshooting:
- Observe user and stakeholder interactions with the application, troubleshooting any issues promptly to maintain system functionality.

4. New Report Generation and Deployment:
- Developed new reports based on user requirements and Business Requirement Documents (BRD).
- Create queries and generate reports using SSRS, Apache:Superset, deploying them on the portal post-sign off.

5. Application Ownership Responsibilities:
- Manage onboarding and deboarding processes for users. -
Administer users' access rights, including Maker/Checker roles, in accordance with RBI regulations.
- Conduct User Access Review (UAR) activities as per regulatory requirements.

6. Data Management:
- Develop pipelines for receiving and processing data from new vendors or partners.
- Ensure smooth data exchange by handling data files using Python scripts or SSIS packages, from sources like Oracle, MySQL, or CSV files.

7. Disaster Recovery (DR) and Data Center (DC) Switching:
- Manage DR-DC switching activities during planned or unplanned events, ensuring minimal downtime and data loss.

8. Ticket Resolution and Data Sharing:
- Resolve tickets related to application issues promptly.
- Share data with users as needed, managing databases on Oracle and MS SQL.

9. Collaboration with Other IT Activities: - Engage in other IT activities related to the application, fostering collaboration and alignment across departments for efficient operation and continuous improvement.

Job Responsibilities for Counterfeit Currency Reporting (CCR) Project:

1. Full-stack Development:
- Developed end-to-end frontend and backend solutions using Python, leveraging the Django web framework.
- Created responsive and user-friendly interfaces using HTML, CSS, and Python-based templates.

2. Application Deployment:
- Deployed the application on Local-UAT- Production to ensure accessibility for users, utilizing deployment best practices.

3. Database Management:
- Utilized MS-SQL database for storing and managing Counterfeit Currency Reporting (CCR) records.

4. User Authentication and Authorization:
- Implemented user authentication and authorization mechanisms, allowing users to securely log in and access the application functionalities using Django default auth.
- Granted appropriate permissions for users to share, edit, and delete CCR data based on their roles and responsibilities.

5. Record Management:
- Designed and implemented features to maintain comprehensive records of Counterfeit Currency Reporting from each branch.
- Enabled users to submit, view, edit, and delete CCR data through intuitive interfaces.

6. Collaboration and Communication:
- Collaborated with stakeholders to gather requirements and ensure alignment with project objectives.

7. Testing and Quality Assurance:
- Conducted thorough testing of the application to identify and rectify any bugs or issues.
- Ensured adherence to quality standards and best practices throughout the development lifecycle.

Job Responsibilities for Credit card NPA Prediction Model Project:

1. Data Collection and Integration:
- Gathered data from diverse sources including CRM, Finacle, and NPA system.
- Integrated collected data to create a comprehensive customer information repository.

2. Exploratory Data Analysis (EDA) and Data Analysis:
- Conducted EDA to understand data distributions, relationships, and patterns.
- Utilized data analysis techniques to derive insights and identify key factors influencing NPA prediction.

3. Machine Learning Model Development: - Developed predictive models using machine learning algorithms such as Logistic Regression, SVM, Random Forest, Decision Tree, and XGBoost.
- Leveraged Python programming for coding base and employed libraries like pandas, NumPy, and scikit-learn for data manipulation and model building.

4. Model Evaluation and Selection:
- Evaluated the performance of various machine learning models using appropriate metrics.
- Selected the best-performing model based on evaluation results and business requirements.

5. Visualization and Deployment:
- Visualized model results and insights using Streamlit library, facilitating interpretation and decision-making.
- Currently involved in testing the NPA prediction model and preparing for deployment on the Django framework.

6. Defaulter Account Identification:
- Implemented the first approach to identify potential defaulters among existing customers using the developed prediction model.
- Automated the process of sharing identified accounts with the operations team and risk department via daily email notifications.

7. New Customer Loan Eligibility Prediction:
- Implemented the second approach to predict the eligibility of new customers for loans using the developed prediction model.
- Provided insights to facilitate decision-making on loan approvals for new customers.

Job Responsibilities for Dashboard Projects Using Power BI:

1. Dashboard Creation and Deployment:
- Designed and developed dashboards using Power BI to represent key financial metrics such as PC, LC, BG and bills. Deployed the dashboards on the portal for stakeholder access and visualization.

2. Stakeholder Engagement and Feedback:
- Collaborated with stakeholders to gather requirements and understand their data visualization needs. Incorporated feedback and implemented changes to dashboards to ensure alignment with stakeholder expectations.

3. Data Collection and Transformation:
- Collected data from multiple sources including Oracle databases. Transformed and prepared the data for visualization by moving it to SQL Server and building connections to import it into Power BI.

4. Dashboard Expansion and Enhancement:
- Currently working on the RM (Relationship Manager) dashboard, expanding the scope of dashboards to include additional metrics and insights relevant to relationship management.

5. Data Management and Integration:
- Managed data extraction, transformation, and loading processes to ensure data accuracy and consistency. Integrated data from disparate sources into Power BI for comprehensive dashboard reporting.

6. Performance Monitoring and Optimization:
- Monitored the performance of dashboards to identify areas for optimization and improvement. Implemented optimization strategies to enhance dashboard performance and responsiveness.

7. User Training and Support: -
Provided training and support to users on accessing and utilizing the dashboards effectively. Addressed user inquiries and troubleshooting issues related to dashboard usage.

Job Responsibilities for File Movement Automation Using Python:

1. Python scripts for automating file movement processes.
- Responsible for daily receiving files from vendors and partners.
- Automated validation of received files, including checks for file names and data per column.
- Managed error file generation and logging. Archiving files daily and handling reverse feed file generation for respective partners.
- Monitored scheduler and file movement processes to ensure smooth operation.

Sales Analyst/ Engineer
May '20 - Dec '22

Hitachi Hirel Power Electronics Pvt. Ltd
Mumbai

• Analyse data, cleaning data with Python and MS-Excel, understand requirements of the customer and get insights from it.
• Prepare dashboards and reports then power BI or Tableau and present in front of senior authority and clients.
• Review past sales data to determine trends in productivity. analyse sales data, create sales forecasts.
• Monitoring and analysing competitive activity, customer, and market trends
• Comparing day-to-day sales productivity

Customer Support Engineer
Jun '18 - Apr '20

Hitachi Hirel Power Electronics Pvt. Ltd
Mumbai

• Understand customers issues and help to resolve

Service Engineer
Mar '17 - May '18

Unique max Pvt. Ltd
Mumbai

I responsible for meeting the daily service maintenance of UPS, DC Chargers and repair needs of the customer's equipment with customer satisfaction.

Trainee Engineer
Jun '16 - Feb '17

Inyantra Technology Pvt. Ltd
Satara

Thoroughly check materials, procedures and mechanical or electrical systems to ensure that customers get high-quality, functional products.

EDUCATION

Advance Certification Program in Data science
Aug '21 - May '22

IIIT- Bangalore   Mumbai
B.E in Electronics and Telecommunication   Jun '11 - May '16
Shivaji university   Satara
Diploma In Industrial Electronics   Jun '08 - Mar '11
MSBTE   Thane