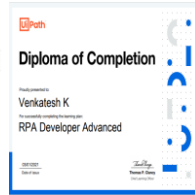




[PCAP-31-03]
PCAP™ – Certified
Associate Python
Programmer
Python Institute



Venkatesh Kotte

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🔗 [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

AI Engineer | Data Scientist | Sr. RPA Developer

Professional Summary:

Strategic and hands-on AI Engineer | Data Scientist | Sr. RPA Developer with 8+ years of experience architecting intelligent automation and GenAI solutions across Finance, Insurance, Logistics, and E-commerce. Specialized in building Retrieval-Augmented Generation (RAG), Conversational-Aware Generation (CAG), and multi-agent LLM systems using LangChain, CrewAI, and FastAPI. Adept at fine-tuning LLMs with LoRA, QLoRA, and prompt tuning, and orchestrating agentic workflows using ReAct and plan & execute paradigms.

Proficient in deploying scalable ML and automation pipelines on AWS, Azure, and GCP, integrating tools like XGBoost, BERTopic, and HDBSCAN for structured and unstructured data insights. Skilled in Python, SQL Server, Oracle, and cloud-native RPA platforms including Automation Anywhere (AA360), UiPath, and Power Automate. Experienced in designing APIs, dynamic Streamlit interfaces, and resilient automation frameworks using Agile, DevOps, and CI/CD methodologies.

A proven communicator and mentor, known for leading client demos, governance reviews, and cross-functional collaboration. Passionate about digital transformation and committed to delivering explainable, human-centered AI systems that enhance decision-making, streamline operations, and drive enterprise efficiency

Skills & Expertise:

Category	Tools & Technologies
Languages	Python, JavaScript, SQL, VBScript, HTML, CSS
RPA Platforms	UiPath, Automation Anywhere (AA360), Power Automate
GenAI & LLMs	LangChain, CrewAI, LangGraph, AutoGen, Agent Protocol, RAG, CAG, KAG, LoRA, QLoRA, Prompt Tuning, Distillation
ML & NLP	XGBoost, Random Forests, BERTopic, LDA, HDBSCAN, K-means, CNN, OCR, IQ Bot, AARI, Scikit learn, PyTorch and TensorFlow
Frameworks & APIs	FastAPI, Flask, Streamlit, REST APIs, JSON, XML
Cloud & MLOps	AWS, Azure, GCP, MLflow, Docker, Kubernetes, CI/CD, Git
Vector Databases	Pinecone, Milvus, Qdrant
Evaluation & Monitoring	Human-in-the-loop frameworks, Bot Insights, ROUGE, BLEU, Unit Testing, UAT
Governance & Documentation	PDD, SDD, TDD, Agile, SDLC, Peer Reviews




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Experience:


AI Engineer & Data Scientist & Sr. RPA Developer– USAA, Plano, TX

 March 2021 – Present

Environment: Gen AI, AWS, MLflow, NLP, LLMS, Langchain, RAG, UiPath, AA360, Python, HTML/CSS/JS, SQL Server, Azure, FastAPI, Streamlit

- Designed, developed, and deployed AI/RPA solutions using Agile SDLC, ensuring iterative delivery, stakeholder alignment, structured testing (Unit, QA, UAT), and full bot lifecycle management.
- Led end-to-end development of GenAI and RPA solutions using LangChain, CrewAI, and FastAPI, integrating LLMs into enterprise workflows for financial planning, summarization, and decision support.
- Fine-tuned and optimized LLMs (GPT, Llama, Claude, Gemini) using LoRA, QLoRA, and PEFT for scalable deployment on AWS and Azure, enabling concise, explainable insights from structured and unstructured data.
- Designed RAG and CAG pipelines for summarizing financial reports, merchant feedback, and associate communications; applied classical ML models (e.g., decision trees, SVMs) for predictive automation and classification.
- Built multi-agent orchestration frameworks using CrewAI and ReAct paradigms to automate cross-functional workflows across finance, HR, and e-commerce domains.
- Engineered scalable APIs and Streamlit dashboards to visualize GenAI outputs, fraud detection metrics, and associate sentiment clusters using BERTopic, HDBSCAN, and telemetry data.
- Established robust evaluation pipelines using ROUGE, BLEU, and human-in-the-loop feedback to ensure trustworthy, explainable AI systems aligned with enterprise governance standards.
- Partnered with product managers and UX teams to design user journeys, feedback loops, and telemetry pipelines; translated ambiguous business requirements into production-ready GenAI solutions.
- Mentored junior engineers and data scientists, led stakeholder demos and onboarding sessions, and presented GenAI innovations through internal showcases and governance reviews.

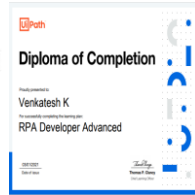
Intelligent Automation Specialist – FedEx, Memphis, TN

 Feb 2019 – Feb 2021


- Engineered and deployed enterprise-grade RPA solutions using Automation Anywhere to automate high-volume, repetitive tasks across logistics and finance operations, reducing manual effort and improving SLA adherence.
- Integrated intelligent data extraction capabilities using OCR and Web Recorder to process structured and unstructured documents, enabling real-time insights and downstream automation.
- Orchestrated bot execution schedules and batch processing across vendor platforms, ensuring reliability, scalability, and compliance with operational SLAs.
- Led end-to-end staging, deployment, and transition of RPA solutions into production environments with minimal downtime, applying DevOps principles and robust testing protocols.
- Automated reporting pipelines and exception handling workflows using PowerShell and VBA, enhancing visibility, traceability, and performance across cross-functional business units.
- Collaborated with business stakeholders to identify automation opportunities, define solution architecture, and deliver measurable impact in operational efficiency and cost reduction.
- Documented automation workflows and governance artifacts (PDD, SDD, UAT), ensuring alignment with enterprise standards and audit requirements.



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RPA Developer – USAA, San Antonio, TX

 Dec 2016 – Jan 2019

- Designed and implemented meta bots and reusable automation frameworks for scalable RPA deployment.
- Automated Outlook email workflows using VBA macros, integrating exception handling for robust execution.
- Managed control room operations and workload balancing via Automation Anywhere Work Queues.
- Led production debugging and optimization efforts to enhance automation performance and reliability.
- Conducted client demos and governance meetings to align automation strategy with business goals and establish best practices.

Featured GenAI Projects:

- **Fraud Detection Model:** Developed with XGBoost and scikit-learn; integrated Streamlit dashboard and RESTful APIs for real-time insights.
- **RAG-Based Summarization Tool:** Built using LangChain, Gemma, and Flask; deployed on AWS with FastAPI and pydantic for scalable document summarization.
- **Multi-Agent LLM Orchestration:** Designed CrewAI agents with ReAct and self-reflection protocols for dynamic task execution and tool integration.
- **Unstructured Data Insights:** Applied BERTopic and HDBSCAN to cluster associate feedback and extract actionable themes for HR optimization.

Leadership & Impact:

- Led cross-functional teams in delivering scalable automation and UI solutions aligned with Client's vision of innovation and customer delight.
- Defined UI/UX strategy and architecture for intelligent automation platforms, integrating AI agents and reusable components.
- Acted as a subject matter expert in front-end development and RPA governance, mentoring junior developers and driving best practices.
- Delivered client demos, stakeholder presentations, and onboarding sessions to foster collaboration and transparency.

Education & Certifications:

Master of Science in Computer Science
University of Central Missouri, Missouri | GPA: 3.7 | 2015–2016

Certifications

- Certified Associate Python Programmer (PCAP 31-03)
- Microsoft Certified Azure AI Engineer Associate (AI-102)
- Microsoft Certified Azure AI Fundamentals (AI-900)
- Automation Anywhere Certified Advanced RPA Professional (AA360)
- UiPath Advanced RPA Developer