

Vigneshwaran D

GenAI | Chatbot | Hyperautomation | RPA

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Summary:

Digital Transformation Manager with 12+ years in process engineering and software development, specializing in Azure AI. Over 4 years focused on GenAI solutions to boost efficiency and business growth. Expertise in AI Search, Document Intelligence, and Function Apps. Skilled in LLM and RAG projects, integrating them with Azure for context-aware applications. Experience includes Reporting AI, Chatbots, Hyperautomation, and RPA.

Technical Skills

- **AI Technologies:** Generative AI, Large Language Models, RAG, LangChain, AutoGen, Crew AI, Information retrieval, Sentiment analysis, word embeddings, Azure Document Intelligence.
- **Conversational AI:** OneReach, Dialogflow CX, AWS Lex, Power Virtual Agent.
- **Frameworks and Tools:** Knowledge-Graphs, AzureOpenAI, Google Cloud Speech API, GIT, Function Apps, FASTAPI, Streamlit, Responsible AI, Evaluation metrics.
- **Programming Languages:** Python, VBA.
- **Libraries:** Pandas, Numpy, NLTK, SpeechRecognition, PyWinAuto.
- **Database:** VectorDB, BLOB, MongoDB, SQL.
- **RPA:** UiPath, Power Automation, Automation Anywhere, Blue Prism.
- **BI Tool:** Power BI.
- **Cloud Platforms and OS:** Azure, AWS, Ubuntu, Windows.

Work Experience

PepsiCo - Manager (Digital Assistant)

Oct 2023 - Present

Leading the development and implementation of cutting-edge AI-driven solutions across vision, language, and text-based use cases, and driving significant efficiency gains. Skilled in developing LLM applications based on RAG and agents.

1. Intelligence Document Summarization/SuMaaS

- Engineered LLM-based solution to summarize large sets of documents with techniques like RAPTOR, Refine, Stuff, and MapReduce which supports multi-format file types.
- Ensured all work met professional standards and best practices in the field.
- Reduced costs by **\$900K** through optimizing analyst required to manage research data from 40 to 16, significantly enhancing operational efficiency.

2. BI Chatbot Using LLM and RAG for SQL Data Retrieval and Predictive Analytics

- Developed a business chatbot using LangChain and custom agents to understand database table schemas.
- Enabled data retrieval from SQL databases based on natural language user input.
- Implemented predictions for the next best actions using the retrieved data.
- Created AI-generated charts to visually represent the results. Utilized LangChain, Multi-Agent Framework, SQL RAG, and predictive analytics techniques.
- Eliminated **7 FTE** positions in MIS through chatbot implementation while maintaining service quality and reducing response times by 60%.

3. AI-Powered Headline and Tagline Generator for Social Media Campaigns

- Developed a multi-agent LLM application to dynamically generate engaging headlines and taglines for new products, promotions, and social media campaigns based on user input.
- Implemented customizable prompts to tailor outputs to different marketing objectives, including product launches, seasonal campaigns, and brand promotions.
- Optimized for social media advertising, ensuring taglines were concise, catchy, and targeted towards specific audience demographics.

Foundever - Manager (Data Science)

Oct 2020 - Sep 2023

Led teams in developing advanced chatbot solutions using AWS Lex and Power Virtual Agent, creating conversational AI interfaces that significantly enhanced user engagement and satisfaction. Expertly leveraged these platforms to design and implement efficient, effective chatbots. Spearheaded UiPath RPA initiatives, overseeing solution architecture, and development, and managing a team of specialists in delivering successful process automation projects.

1. Admin Chatbot

- Identified potential for a Hyper Automation use case to address administrative activities for the CallMiner Admin Team.
- Evaluated existing manual processes for creating, deleting, resetting passwords, and addressing login issues.
- Developed a chatbot solution to collect requests from both agents and the admin team and follow business conditions to complete actions and notify the respective team.
- Reduced admin team headcount from **10 to 2 FTEs** through chatbot implementation.

2. Zenni Chatbot

- Led Zenni Chatbot development, managing team and overseeing deployment stages.
- Developed multiple Chatbot modules including Order Status, Offers, and Product Suggestions.
- Managed smooth deployment of chatbot to the production environment.
- Delivered ongoing live support for deployed chatbot solutions.

3. Custom Bot Orchestrator

- Analysed and identified smaller automation use cases where UiPath licensing costs were prohibitive.
- Designed and developed a custom Orchestrator solution capable of deploying and managing automation solutions in multiple programming languages.
- Deployed the solution, enabling automated orchestration, version control, and regular frequency execution of all deliverables, streamlining operational efficiency.

AGS Health - Supervisor (RPA - Architect)

Jun 2015 - Sep 2020

Experienced RPA Supervisor in charge of 14+ sub-processes. Expert in RPA project management, from development to implementation. Capable of providing proof of concept documents, team leadership, and technical support. Effective issue solver for automated procedures, ensuring timely solutions. Capable of managing stakeholders to maximize Bot utilization.

- Developed a custom RPA Orchestrator tool using Python and MongoDB, featuring version control, user/machine access management, and cross-platform compatibility.
- Designed and implemented **165+ Bots** over 4 years, maintaining 85% active status rate.
- Implemented end-to-end automation solutions using Selenium, significantly reducing manual interventions in processes.
- Developed Excel VBA macros and a custom web automation testing template, enhancing production efficiency and quality assurance processes.
- Leveraged expertise in various RPA technologies to deliver innovative solutions to streamline business processes and improve operational efficiency.

Education

- Bachelor of Computer Applications, Sathyabama Institute of Science and Technology, Chennai (May 2011, Graduated with 75.6% Distinction).

Certifications

- Virtual Agent Development with Customer Experiences with Contact Center AI in Dialogflow CX from Coursera (Apr 2023).
- RPA Infrastructure Engineer from UiPath (Apr 2022).
- UiPath Security from UiPath (Mar 2022).
- Ultimate AWS Certified Solutions Architect Associate SAA-C03 from Udemy (Feb 2022).

Awards and Achievements

- Act As Owners and Celebrate Success awards from Pepsico in 2024.
- Best Performer award from AGS Health for 2017, 2019 and 2020.
- Recognition from former Indian President Dr. A.P.J. Abdul Kalam for the Tsunami reporting system project in HSC.