

# Dipanshu Porwal

Senior AI Developer

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## SUMMARY

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**Sr. AI and Python developer** with 8 years of experience in the Manufacturing, Healthcare and Banking domains. Proven expertise in designing, modelling, implementing, testing and deploying scalable BOTs and Voice Assistants leveraging **Agentic AI** architectures, **Gen AI** frameworks, **LLMs**, **prompt engineering**, and **NLP** techniques. Seeking a similar role and position in a progressive organization where I can continue to drive innovation and AI-powered transformation..

## RELEVANT EXPERIENCE

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### Senior AI Developer, *Wurth IT*

Nov 2023 – Present

- **LLM-Based BOT Framework:** Designed and developed a production-grade **hierarchical, multi-agent** framework using **LLMs**. It is containerized with Docker for seamless deployment and follows an **Agentic, orchestrator-driven architecture** to intelligently route user queries to the appropriate tools or functions-eliminating the need for traditional slot-filling. The system validates function parameters in real-time and leverages conversational memory to handle overlapping intents, reuse prior inputs, and maintain contextual continuity. This design enables more natural, dynamic, and human-like interactions.
- **Voice Assistant Development(Generative AI):** Architected and implemented an intelligent voice assistant leveraging **RASA**, **Python**, and **Docker**. Integrated Retrieval-Augmented Generation (**RAG**) techniques to significantly boost response precision. Utilized **Qdrant** and **Weaviate** for high-dimensional vector search, and employed **LangChain**'s SQL Database Toolkit for optimized, context-aware data retrieval. Seamlessly incorporated OpenAI's **LLMs**(GPT-4, GPT-4o) for generating context-rich, human-like responses with advanced reasoning capabilities.
- **Team & Project Management | Code Deployment:** Led a cross-functional team and managed project execution using Jira for task tracking and progress monitoring. Oversaw code versioning and collaboration through GitHub, and successfully deployed applications on **RedHat OpenShift** connected with **Azure** services using **Kubernetes** based **Helm chart** for scalable and secure production hosting.

### AI Engineering Senior Analyst, *Accenture*

Nov 2021 – Oct 2023

- **Bot Development(Generative AI):** Designed and implemented an API bot leveraging **LLMs**(GPT-4) and OpenAI APIs to intelligently gather API names, resource details, and operation specifications from users, automating the creation of corresponding APIs with high accuracy and contextual understanding.
- **MyApproval Portal Automation:** Developed a task automation bot using **Google Dialogflow**, enabling seamless approval, rejection, and forwarding of requests. Integrated with Microsoft Teams to streamline workflow and enhance user collaboration.
- **Conversational Bot Development:** Built a **Microsoft Bot Framework** based bot utilizing LUIS and QnA Maker to facilitate access request submissions, holiday calendar queries, and FAQ assistance, improving user self-service capabilities.
- **Akamai Portal Automation:** Engineered a URL management bot via **Kore.ai** to automate URL flushing & redirection for the Akamai portal, increasing operational efficiency and reducing manual intervention.
- **Analytics Dashboard Creation:** Created interactive **Power BI** dashboards tailored to customer needs, delivering comprehensive insights and performance analytics across multiple bot implementations for data-driven decision-making.
- **Micro component QnA Bot Development:** Created modular QnA bot components in TypeScript and integrated them seamlessly with **IBM Watson**.
- **Testing and Quality Assurance:** Developed detailed test cases and performed rigorous validation for various bots during enhancement cycles using Azure DevOps Test Plans, ensuring high-quality releases.
- **Bug Fixing and Performance Optimization:** Troubleshooted and resolved defects in Python-based projects like DocZ and DocFocus, while enhancing performance and stability of the GDP Reviewer tool.

**Senior Software Engineer, Wipro Digital**  
**Project Engineer, Wipro Digital**

**June 2021 – Oct 2021**  
**Aug 2017 – May 2021**

- **Bot Development and Integration:** Developed and implemented various bots, including a User Assist BOT for handling Service Catalogs, Known Issues, and FAQs across Customer domains, a BOT for reactivating Windchill user licenses; and a document-based query assistance BOT using **IBM Watson** services(Assistant and Discovery) and **Python**.
- **Customer Coordination and Feedback Integration:** Coordinated with customers to address requirements, provided regular project demos, and incorporated feedback for continuous improvement.

## TECHNICAL SKILLS

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- Proficient in programming languages including **Python, JavaScript, TypeScript, Node.js**, and **React.js**.
- Experienced with relational databases (**MySQL**) and NoSQL databases (**MongoDB**)
- Knowledgeable in vector databases such as **Qdrant** and **Weaviate**.
- Strong understanding of **Data Structures** and **Algorithms**.
- Hands-on experience with data analysis tools, like **Microsoft Power BI** and visualization libraries, like **NumPy, Pandas, TensorFlow**, and **Scikit-learn**.
- Skilled in building Agentic AI and Generative AI applications using OpenAI's APIs and LLM models, with expertise in **LangChain, LangGraph, LangSmith**, and **LangServe** to develop modular, observable, and production-grade **RAG**-based and conversational AI systems with real-time contextual understanding.
- Skilled in chatbot/voice assistant development using NLP techniques and conversational AI platforms, like **Avaamo, Kore.ai, IBM Watson, Google Dialogflow, Amelia, CAIP, Microsoft Bot Framework**, and **RASA framework**.
- Experience in integrating **backend services with front-end applications** and external APIs.
- Expertise in machine learning models for classification and regression, including **Logistic Regression, SVM, Decision Trees**, and **Random Forest**.
- Capable of designing, developing, and implementing scalable, elastic **microservice**-based solutions.
- Hands on experience with **Restful APIs, Git, Jira, Azure DevOps, Docker** and **Openshift Redhat**.

## EDUCATION

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**Bachelor of Technology in Computer Science and Engineering**  
NIT Jalandhar  
Cumulative GPA: 7.41

**June 2017**

## CERTIFICATION & RECOGNITIONS

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- Certified in **AI Agent Fundamentals (HuggingFace)**
- Certified in **Building AI Agents & Agentic AI System via Microsoft Autogen(Udemy)**
- Certified in **Agentic AI Bootcamp – LangGraph & LangChain (Udemy)**
- Certified in **Machine Learning A-Z™ – Hands-On Python for Data Science (Udemy)**
- Certified in **Machine Learning A-Z™ – Hands-On Artificial Neural Networks (Udemy)**
- Certified in **IBM Watson – Versions V3.1 & V4**
- Certified in **Microsoft Azure Fundamentals**
- Trained in **Kore.ai** Virtual Assistant Platform (Basic)
- Certified in **CAIP – Accenture's Conversational AI Development Tool**
- Certified in **Amelia Conversational AI V5 Enablement**
- **Best Project Team Award** at Wipro for successful BOT development and deployment
- Received **Kudos - Core Values Award** for Integrity at Accenture
- **Top 10 Finalist (out of ~15,000)** – All 3 ideas selected in Accenture's **CloudX Hackathon**
- Received **RETA Award (Europe)** for best enterprise solution in current project at Würth IT