**PROJECT SCOPE STATEMENT**

**Project Goals:**

* To design and implement an AI-driven chatbot capable of understanding and responding to customer queries in real time.
* To demonstrate how automation can improve customer support efficiency and reduce manual workload.
* To integrate modern AI and NLP technologies into a functional prototype that aligns with best practices in user experience and technical reliability.
* To promote effective collaboration and project management using GitHub for version control and Jira for task tracking.

**Project Objectives:**

1. Gather and analyse customer support requirements to define chatbot functionality.
2. Develop the chatbot using suitable AI and NLP frameworks (e.g., Python, Dialog flow).
3. Train the chatbot to recognize and respond accurately to common customer inquiries.
4. Test chatbot performance to ensure accuracy, usability, and reliability.
5. Implement version control and collaboration using GitHub and Jira, documenting progress and configuration changes.

**Key Stakeholders:**

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| **Stake holders** | **Role** | **Responsibilities** |
| Project sponsor | Provide funding and strategic direction for the chatbot project | Approves project scope, budget, and resources; ensures alignment with business goals |
| Project manager | Oversees planning, execution and delivery of the chatbot project | Coordinates tasks, manages timelines and risks and ensures project objectives are met |
| AI development Team | Responsible for designing, coding and training the chatbot | Develops Natural processing language models, integrates backend systems and conducts performance testing |
| IT infrastructure Team | Ensures the chatbot is properly deployed and maintained | Provides server resources, manages security configurations and supports deployment |
| Customer support department | End users of the chatbot system | Provide input on frequent customer queries, tests the chatbot for usability and accuracy |
| Quality Assurance Team | Elevates the chatbot’s functionality and performance | Conducts testing to ensure reliability, accuracy and compliance with standards |
| Data privacy and compliance officer | Ensures the chatbot adheres to data protection and privacy regulations | Reviews data handling processes to maintain compliance with laws |
| Customers | Interact directly with the chatbot for support services | Expect quick, accurate and helpful responses: their satisfaction determines success |
| Technology partners | Provide AI tools or cloud infrastructure | Supports integration, licensing and technical troubleshooting |
| Marketing Team | Promotes and manages customer awareness of the new chatbot service | Develops communication materials and gathers feedback |

**Deliverables:**

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| **Deliverable** | **Description** | **Outcome** |
| AI-Powered Chatbot Prototype | A working chatbot capable of handling common customer queries using AI and NLP. | Documentation of functional, performance, and user testing results. |
| Project Plan Document | A complete report outlining the project scope, objectives, schedule (Gantt chart), risk and change management strategies, and tool usage. | Serves as the main reference for project execution, monitoring, and evaluation. |
| GitHub Repository | A GitHub repository containing all project code, documentation, and version history. | Ensures collaboration, version tracking, and secure code management. |
| Testing and Evaluation Report | Documentation of functional, performance, and user testing results. | |  | | --- | |  |  |  | | --- | | Confirms that the chatbot meets accuracy, usability, and reliability standards. | |
| Risk and Issue register | List of identified risks with mitigation and contingency strategies. | Helps monitor and manage project risks throughout its lifecycle. |
| Change Request Log | Record of all change requests and their resolutions. | Ensures transparency and traceability in scope or requirement changes. |
| Project Handover and deployment package | Complete package including source code, configuration, deployment scripts, and operational instructions. | Allows the IT team to maintain, scale, or update the chatbot independently. |

**Constraints:**

* Limited access to external APIs or enterprise systems beyond the development environment.
* All development must use open-source or freely available tools.
* Workload and responsibilities must be equally distributed among team members.

**Success Criteria**

The project will be considered successful when:

* A working chatbot prototype is developed, tested, and demonstrated.
* The chatbot can accurately respond to at least 80% of predefined customer queries.
* Feedback from the unit facilitator and peers confirms that the chatbot meets functional and usability expectations.