

BUSINESS ANALYST

Domain-

Software Development

BRD – DOCUMENT

Business Requirements Document (BRD)

Building Chatbot Using ML

1.0 Date: April2025

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1. Executive Summary

This document outlines the business requirements for developing and implementing an AI/ML chatbot system intended to improve customer engagement and automate support interactions. The chatbot will serve as a virtual assistant available 24/7 on the company's website and messaging platforms to address common user queries, reduce support costs, and enhance user satisfaction

2. Purpose of the Document

The primary purpose of this BRD is to define the business needs, project scope, functional expectations, and success metrics related to the chatbot implementation. It acts as a point of alignment for stakeholders, ensuring that both technical and non-technical teams have a shared understanding of the goals and deliverables

3. Project Overview

With increasing customer interaction volumes and growing expectations for instant responses, the organization seeks to deploy a conversational AI/ML chatbot. This tool will automate first-level support queries, streamline lead qualification, and provide seamless handovers to human agents when necessary. It is a scalable, intelligent, and cost-effective solution to support both customers and internal teams.

4. Business Objectives

- Reduce average response and resolution times by automating FAQs and repetitive queries.
- Improve user experience and engagement through instant, 24/7 interaction.
- Increase operational efficiency by reducing manual workload on support staff.
- Collect and analyse customer interaction data for better service insights.
- Seamlessly integrate with existing CRM and support ticketing systems.

5. Scope of the Project

In Scope:

- Development of an NLP-enabled chatbot with multilingual support.
- Integration with website, WhatsApp Business API, and social media platforms.
- Training the bot with domain-specific FAQs and workflows.
- Handoff logic for human agent escalation.
- Admin panel for managing conversations and viewing analytics.

Out of Scope:

- Voice-based assistance (not included in initial phase).
- Hardware procurement or in-store kiosk integration.

6. Stakeholders

Stakeholder Role	Department	Responsibilities
Project Sponsor	Management	Budget approval, strategic oversight
Product Owner	Marketing & CX	Feature prioritization, content flow
Development Lead	IT	Technical architecture and implementation
QA Team	Quality Assurance	Testing and validation
Customer Support Team	Operations	Input on bot scripts and real-life scenarios

7. Business Requirements

- The chatbot should be able to handle at least 70% of daily support interactions.
- It must support text input and button-based replies.
- It should recognize user intent and provide appropriate responses.
- Escalation to human agents must be triggered upon user request or bot failure.
- Admins should be able to view chat history, metrics, and user behaviour reports.

8. Functional Requirements

The Functional Requirements Document (FRD) will detail specific features and functionalities to support the business needs identified in this section. Key functions include:

- Chat interface embedded on the homepage and accessible via WhatsApp.
- Pre-trained NLP engine with support for custom training data.
- Backend dashboard with access control for admins and agents.
- Integration with CRM to log user data and conversation history.
- Auto-reply templates for frequently asked questions.

9. Assumptions and Constraints

Assumptions:

- Users will have access to a stable internet connection.
- The chatbot will not require user login in the initial version.
- Development team has access to required APIs and data sources.

Constraints:

- Project must be completed within 10 weeks from initiation.
- Data privacy laws must be strictly followed.
- Limited budget allocation for initial training datasets.

10. Success Criteria

- Reduction in ticket volume by 50% within the first quarter post-launch.
- Minimum chatbot accuracy rate of 85% for intent recognition.
- Positive feedback from at least 70% of surveyed users.
- Average handling time per chat session reduced by 40%.
- Uptime of the system maintained at 99.9%.

11. Approval and Sign-off

Upon review and mutual agreement, the below stakeholders confirm that the contents of this document meet the business goals and are aligned with the overall strategy.

Stakeholder	Title	Signature	Date
NAME	Project Sponsor	[Signature]	[Date]
NAME	Project Manager	[Signature]	[Date]
NAME	IT Department Head	[Signature]	[Date]
NAME	Compliance Officer	[Signature]	[Date]
NAME	Business Analyst	[Signature]	[Date]