

SupportAI: Risk Analysis Report

Introduction

This document presents a risk analysis for the **SupportAI Smart Chatbot for Businesses** project. It identifies potential risks that could impact the project's progress, evaluates their probability and impact, and outlines mitigation strategies to minimize their effects. The goal is to ensure the team can proactively manage technical, operational, and business risks throughout development.

Risk Analysis Table

Category	Risk Description	Probability	Impact	Mitigation / Prevention
Technical	AI model integration (Gemini / GPT / NileChat) may fail or produce inconsistent outputs.	Medium	High	Create a fallback layer with multiple models and strong prompt formatting.
Data Quality	Poor or insufficient Egyptian Arabic datasets for training emotion detection or intent models.	High	High	Use open datasets, fine-tuning, and real testing with SMEs.
Performance	Chatbot may experience slow response time or overload under concurrent users.	Medium	Medium	Optimize backend performance using async, caching, and monitoring tools.
Security	Unauthorized access to business data or chat logs.	Medium	High	Implement JWT, encryption, and role-based access controls.
User Acceptance	Businesses may find customization complex or prefer competitors.	Medium	High	Simplify dashboard UI and emphasize SME-friendly pricing.
Financial	Budget or sponsorship delays.	Low	Medium	Use minimal-cost deployment options and open-source resources.
Ethical / Legal	Issues with data privacy and user consent.	Low	High	Ensure consent-based data usage and anonymize logs.

Conclusion

This risk analysis serves as a living document to help the SupportAI team foresee and mitigate challenges throughout the project lifecycle. Regular updates and monitoring are recommended to maintain alignment with evolving project goals and external dependencies.