

## **Business Requirements Document (BRD)**

**Project Title:** Autonomous AI Agent for Business Task Automation

**Prepared For:** Freelance AI Developer

**Prepared By:** [Your Name / Company]

**Date:** June 19, 2025

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## **1. Executive Summary**

This document outlines the requirements for building an intelligent AI Agent that can autonomously perform business tasks such as reading and responding to emails, summarizing documents, generating reports, and integrating with third-party APIs. The AI Agent will serve as a virtual assistant for internal company workflows, reducing manual effort and increasing productivity.

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## **2. Business Objectives**

- Automate repetitive knowledge tasks such as email reading, summarization, data entry, and simple decision-making.
  - Improve turnaround time by processing large volumes of documents, emails, and data faster than a human.
  - Reduce costs associated with administrative and analytical roles.
  - Integrate with internal and external tools such as Gmail, Notion, Slack, and Google Sheets for end-to-end automation.
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## **3. Scope of Work**

### **3.1 In-Scope**

- Natural Language Processing (NLP)-based understanding of instructions
- Multimodal support (text, PDFs, spreadsheets, etc.)
- Email reading and auto-reply suggestions
- Task execution using plug-in tools (like API calls, file editing)
- Web-based UI with a chatbot interface for interaction
- Role-based access for Admin and Users

### **3.2 Out-of-Scope**

- Physical automation tasks
  - Mobile application (phase-2)
  - Custom LLM training (will use open-source or API-based models)
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## 4. Functional Requirements

### 4.1 Agent Instruction Interface

- Allow user to enter or speak instructions (text or voice)
- Accept file uploads for context (PDFs, DOCX, CSV)
- Provide prompt templates for common use cases

### 4.2 Core Agent Capabilities

Capability	Description
Email Parsing	Connect Gmail via OAuth2. Parse emails, identify intents, and generate summaries or responses.
Document Summarization	Ingest large PDFs or DOCX files, extract structured summaries.
Data Manipulation	Accept Excel/CSV input, perform transformations, and export results.
Internet Search	Use API-based search or web-scraping tools to answer real-time queries.
Scheduling	Suggest meeting times based on calendar availability.
Report Generation	Create formatted reports (PDF/HTML) from provided data.

### 4.3 Output Types

- Text response
- Downloadable files (CSV, PDF)
- Charts (optional)
- API responses (JSON)

## 5. Non-Functional Requirements

Requirement	Description
Scalability	Should support at least 100 concurrent users.
Security	OAuth2 login, encrypted storage of tokens, GDPR compliant.
Performance	Respond to most queries in < 4 seconds.
Availability	Uptime of 99.5% expected.
Logs & Monitoring	Basic logging and error handling system.

## 6. Integration Requirements

System	Integration Type
Gmail API	OAuth 2.0, read/send email
Google Calendar	OAuth 2.0, read/write events
Slack	Send automated messages
Notion API	Insert notes or logs
Google Sheets API	Read/write spreadsheet data

## 7. Technical Stack (Recommended)

Layer	Technology
Frontend	ReactJS / Next.js
Backend	Python (FastAPI / Flask)
LLM API	OpenAI GPT-4 / Mistral / Local model
DB	PostgreSQL / SQLite
File Parsing	PyMuPDF / Pandas / Tika
Hosting	Vercel / AWS EC2
CI/CD	GitHub Actions / Docker

## 8. User Roles & Permissions

Role	Capabilities
Admin	Full access, manage users, configure APIs
User	Issue commands, upload files, view responses
Viewer	Read-only access to outputs

## 9. Sample Workflow

### Use Case: Automated Email Summary and Reply

1. User logs in and authenticates Gmail.
2. AI Agent reads last 50 unread emails.
3. Summarizes emails and flags important ones.
4. Suggests auto-replies using GPT-based summarization.

5. Sends reply on user approval.
6. Archives processed emails.

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## 10. Milestones & Deliverables

Milestone	Description	Timeline
M1	UI/UX Mockups	Week 1
M2	Core Agent Integration	Week 2-3
M3	Gmail + Calendar + File Support	Week 4
M4	Output generation & Final Testing	Week 5
M5	Deployment & Handover	Week 6

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## 11. Risks & Mitigations

Risk	Mitigation
GPT hallucination	Implement prompt engineering and retrieval-augmented generation
API quota limits	Use caching and retries, handle failures gracefully
Data privacy concerns	Avoid storing sensitive data, encrypt all stored tokens

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## 12. Acceptance Criteria

- End-to-end task completion via natural language prompt.
- At least 3 integrations working (Gmail, Calendar, Sheets).
- Document summarization handles 100+ page PDFs.
- Deployment instructions + documentation provided.
- All API keys/configs externalized via `.env`.


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## 13. Appendix

### 13.1 Example Prompts

- "Summarize this 60-page project proposal."
- "Reply to the latest 3 emails with availability."
- "Create a sales report from this spreadsheet."
- "Schedule a meeting next week with Raj and Priya."

## 13.2 Sample Output

 "You have 3 emails related to project X. One requires urgent attention. Suggested reply: 'Thanks for the update, I'll review and get back shortly.'"