**Project Charter Document**



**Project Name:** Edubot: AI-Powered Learning Assistant for School student

**Industry: Edtech**

**Department:** Academic technology & AI solution

**Product/Process:** Data Scientist



**Prepared By**

|  |  |
| --- | --- |
| **Document Owner(s)** | **Project/Organization Role** |
| Give your name | Mention that you are data analyst or data scientist |
| Anupam Sarkar | Data Scientist |
|  |  |

**Project Charter Version Control**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change Description** |
| 1.0 | 19/03/25 | Anupam Sarkar | Document created |
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# PROJECT CHARTER PURPOSE

The project charter defines the scope, objectives, and overall approach for the work to be completed. It is a critical element for initiating, planning, executing, controlling, and assessing the project. It should be the single point of reference on the project for project goals and objectives, scope, organization, estimates, work plan, and budget. In addition, it serves as a contract between the Project Team and the Project Sponsors, stating what will be delivered according to the budget, time constraints, risks, resources, and standards agreed upon for the project.



# PROJECT EXECUTIVE SUMMARY

* **Business Problem-**

Traditional learning methods often fail to engage students effectively, leading to reduced interest, lack of personalized learning, and difficulty in understanding complex topics. Schools require an interactive, AI-driven educational solution to support students with instant answers, subject explanations, and adaptive learning experiences while ensuring that responses remain within the provided syllabus

* **Business Objective-**

Maximize student engagement and learning efficiency.

* **Business Constraint-**

Minimize  off-topic responses by restricting the chatbot to syllabus based queries.

* **Success Criteria:**
  + **Business Success Criteria-** Increase the student engagement and improvement in a academic performance
  + **Economic Success Criteria-** Cost-effective development and maintenance within the school’s budget.
* **Data Collection**: Data collected from class 10 NCERT book
* **Scope:** The project is specifically designed for academic technology and AI innovation within the EdTech sector. It focuses on building an AI-powered assistant for NCERT Class 10 Science students, integrating syllabus-restricted learning support.
* **Assumptions:** Data will be collected from NCERT official books. Local system and cloud infrastructure will be available. Google Gemini API and MySQL database access is enabled. FAISS and vector embedding frameworks are functional on local setup.
* **Risks**: Gemini API quota limitations or rate throttling, unstructured NCERT content format inconsistencies, MySQL database access permissions, weak network connectivity for cloud interactions, FAISS indexing or embedding dimension mismatches.
* **Costs:** 1 Data Scientist × 50 hours × ₹500/hr = ₹25,000 estimated budget.  
  (Assuming local infrastructure and free-tier Gemini API usage)
* **Timeline:** Total project timeline is 20 days. Phase 1 (Data Extraction & Processing) - 5 days, Phase 2 (EDA & Embedding) - 7 days, Phase 3 (LLM Integration & Deployment) - 8 days.
* **Approach:** CRISP-ML(Q) methodology was followed with custom enhancements to manage NLP preprocessing, embedding generation, semantic search, and large language model (LLM) integration. Project includes modular execution of text processing, LLM-based answering, and Streamlit-based chatbot deployment.



# PROJECT OVERVIEW



# PROJECT SCOPE

## Project Deliverables

|  |  |
| --- | --- |
| **Milestone** | **Deliverable** |
| * Identifying Constraints and design the project architecture, explore various public forums to collect relevant data, Data Preparation. | * Deliverable 1.1—Identifying Constraints and design the project architecture. * Deliverable 1.2—Explore various public forums to collect relevant data. * Deliverable 1.3— Data Preparation |
| * EDA and Descriptive Analytics | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2— Insights documentation |
| * Show case and review, Final Presentation and documentation, Handover and KT. | * Deliverable3.1 – show case and review. * Deliverable3.2 – Final Presentation and documentation * Deliverable3.3 – Handover and KT |

## Deliverables Out of Scope

* Web Application
* Mobile App
* Cloud based deployment

## Project Duration (start date: 15/09/2021 End date: 05/10/2021)

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Milestone** | **Date Estimate** | **Deliverable(s) Included** | **Confidence Level** |
| * Identifying Constraints and design the project architecture, explore various public forums to collect relevant data, Data Preparation. | [15/09/2023]  -  [21/09/2023] | * Deliverable 1.1—Identifying Constraints and design the project architecture. * Deliverable 1.2—Explore various public forums to collect relevant data. * Deliverable 1.3— Data Preparation | [High] |
| * EDA and Descriptive Analytics | [22/09/2023]  -  [30/09/2023] | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2--- Insights documentation | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [01/10/2023]  -  [05/10/2023] | * Deliverable3.1 – show case and review * Deliverable3.2 – Final Presentation and documentation * Deliverable3.3 – Handover and KT | [Medium] |



# PROJECT CONDITIONS

## Project Assumptions

* Data will be extracted from public sources and then client provided data is mapped and finally one master data will be shared by Innodatatics for further analysis.
* Dashboards and insights are mandatory.

## Project Issues *– Fill it as and how project progresses.*

**Priority Criteria**

1 − High-priority/critical-path issue; requires immediate follow-up and resolution.

2 − Medium-priority issue; requires follow-up before completion of next project milestone.

3 − Low-priority issue; to be resolved prior to project completion.

4 − Closed issue.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Date** | **Priority** | **Owner** | **Description** | **Status & Resolution** |
| 1 |  | High |  |  |  |
| 2 |  | High |  |  |  |

## Project Risks – *Identify if there are any risks that you foresee.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Risk Area** | **Likelihood** | **Risk Owner** | **Project Impact-Mitigation Plan** |
| 1 | [Project Risk] | [High/Medium/Low] |  |  |
| 2 | [Project Risk] | [High/Medium/Low] |  |  |



# PROJECT REFERENCES – Any previous projects you have referred. If yes, please share the details.

|  |  |
| --- | --- |
| **Project** | **Description** |
| [ |  |
|  |  |
|  |  |

# APPROVALS

**Prepared by** \_Anupam Sarkar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Manager

**Approved by** Akshaya Acharya\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Sponsor

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Executive Sponsor

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Client Sponsor

