**Project Charter Document**



**Project Name :** Automated Content Generation for University Courses

**Department :** Academic Affairs / E-Learning Department

**Focus Area :** On-demand Content Generation

**Product/Process :** Generative AI System



**Prepared By**

|  |  |
| --- | --- |
| **Document Owner(s)** | **Project/Organization Role** |
| Pavan Kumar CH | AI Engineer |

**Project Charter Version Control**

|  |  |  |  |
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| **Version** | **Date** | **Author** | **Change Description** |
| 1.0 | 17/07/2024 | Pavan Kumar Ch | Updated details |
|  |  |  |  |

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# 1 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 :** The university needs to generate on-demand content for a wide range of courses. Manual creation of this content is too time-consuming and labour-intensive.
* **Business Objective :** Maximize content generation quality with the minimum possible time.
* **Business Constraint :** Minimize the plagiarism of content.

### Success Criteria

* **Business Success Criteria :** Reduce the time taken for generation of content by as much as 80%.
* **Machine Learning Success Criteria :** The question duplication rate must be less than 5%.
* **Economic Success Criteria :** Increase the revenue of online-based courses by 15% in the first semester of implementation.

### Data Collection

* **Type:** **Secondary** Data Collection
* **Source:** Data has been provided by the client.

### Scope: ****Focus** **Areas**** Content Generation for Online Courses.

### Assumptions: ****Resources**** Cloud and GPU will be provided by the customer.

### Risks: ****Potential Issues**** Server connectivity might be weak, etc.

### Costs: ****Estimation**** Project cost can be assumed by calculating [number of hours \* number of human resources (cadre wise) \* hourly cost].

### Timeline: ****Duration**** High-level timeline of the project, e.g., Project will span 25 to 30 days.

### Approach: ****Methodology**** Cross Industry Standard Process for Machine Learning with Quality Assurance (CRISP-ML(Q)).



# PROJECT OVERVIEW



# PROJECT SCOPE

## Goals and Objectives

|  |  |
| --- | --- |
| **Goals** | **Objectives** |
| * To generate high-quality, on-demand content for a wide variety of university courses. | * Ensure efficient and rapid content generation using AI technology to reduce manual effort and time required. • Maintain high content quality and minimize plagiarism. |

## Project Deliverables

|  |  |
| --- | --- |
| **Milestone** | **Deliverable** |
| * Identifying Constraints and designing the project architecture, exploring various public forums to collect relevant data, Data Preparation. | |  | | --- | | ● Deliverable **1.1** — Identifying Constraints and designing the project  architecture.  ● Deliverable **1.2** — Explore various public forums to collect relevant data.  ● Deliverable **1.3** — Data Preparation. |  |  | | --- | |  | |
| * EDA and Descriptive Analytics, Model building for content generation using Generative AI. | * Deliverable **2.1**— EDA and Descriptive Analytics * Deliverable **2.2**—Model building for content generation using Generative   AI. |
| * Model Evaluation, tuning and insights, Deployment | * Deliverable **3.1**— Model Evaluation, tuning and insights. * Deliverable **3.2**— Deployment |
| * Final Presentation and documentation, Handover and KT. | * Deliverable **4.1** – show case and review * Deliverable **4.2** – Final Presentation and documentation * Deliverable **4.3** – Handover and KT |

## Deliverables Out of Scope

* designs
* mobile app

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

|  |  |  |  |
| --- | --- | --- | --- |
| **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. | [17/07/2024]  -  [21/07/2024] | * 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, Model Building for Association (Fuzzy Algorithm) and Recommendation | [22/07/2024]  -  [28/07/2024] | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2— Model Building for Association (Fuzzy Algorithm) and Recommendation | [High] |
| * Model Evaluation, tuning and insights, Deployment | [29/07/2024]  -  [05/10/2024] | * Deliverable 3.1— Model Evaluation, tuning and insights. * Deliverable 3. 2— Deployment | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [06/08/2024]  -  [12/08/2024] | * Deliverable4.1 – show case and review * Deliverable4.2 – Final Presentation and documentation * Deliverable4.3 – Handover and KT | [Medium] |



# PROJECT CONDITIONS

## Project Assumptions

* Work on data which is extracted from public sources.
* Can create a web API by using flask or streamlit.
* Cloud deployment should be done.
* **Robust Tested:** Application should be tested for noise data also.

## Project Issues

**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 & Constrains

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



# Project Structure Approach

|  |  |
| --- | --- |
| **Steps** | **Description** |
| * Requirements Gathering | * Define content types and quality expectations with input from stakeholders. |
| * Data Acquisition and Preparation | * Identify and gather relevant datasets such as course syllabi, textbooks, academic papers, and lecture notes. Clean and preprocess the data. |
| * Model Selection and Development | * Choose and fine-tune appropriate AI models (e.g., NLP models). |
| |  | | --- | | * Integration with E-Learning Platforms |  |  | | --- | |  | | * Design interfaces/APIs for seamless content integration. |
| |  | | --- | |  |  * Quality Assurance and Evaluation | |  | | --- | | * Test content quality, coherence, and accuracy against   benchmarks. |  |  | | --- | |  | |
| |  | | --- | |  |  * Deployment and Maintenance | |  | | --- | | * Deploy AI system in e-learning environments   and plan for ongoing maintenance. |  |  | | --- | |  | |
| |  | | --- | |  |  * User Training and Support | |  | | --- | | * Provide training and support for faculty on   using AI-generated content. |  |  | | --- | |  | |
| |  | | --- | |  |  * Ethical Considerations | * Address ethical implications and develop guidelines for responsible use. |



# Project Team Organization Plans



# PROJECT REFERENCES

|  |  |
| --- | --- |
| **Milestone** | **Deliverable** |
| [ |  |
|  |  |
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# APPROVALS

**Prepared by** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Manager

**Approved by** Sharat Chandra M\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Sponsor

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Executive Sponsor

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Client Sponsor



# APPENDICES

## Document Guidelines

## Project Charter Document Sections Omitted

