**Project Charter Document**



**Project Name:** Embryo Quality Prediction

**Industry:** Health Care

**Department:** ART - IVF

**Product/Process:** Web application



**Prepared By**

|  |  |
| --- | --- |
| **Document Owner(s)** | **Project/Organization Role** |
| Revanth Kumar R | Data Scientist |
|  |  |
|  |  |

**Project Charter Version Control**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change Description** |
| 1.0 | 03/04/2025 | Revanth Kumar R | Document created |
|  |  |  |  |

**TABLE OF CONTENTS**

[1 PROJECT CHARTER PURPOSE 3](#_Toc138436145)

[2 PROJECT EXECUTIVE SUMMARY 3](#_Toc138436146)

[3 PROJECT OVERVIEW 4](#_Toc138436147)

[4 PROJECT SCOPE 4](#_Toc138436148)

[4.1 Project Deliverables 4](#_Toc138436149)

[4.2 Deliverables Out of Scope 4](#_Toc138436150)

[4.3 Project Duration (start date: 15/09/2021 End date: 15/10/2021) 4](#_Toc138436151)

[5 PROJECT CONDITIONS 5](#_Toc138436152)

[5.1 Project Assumptions 5](#_Toc138436153)

[*5.2* Project Issues *– Fill it as and how project progresses.* 5](#_Toc138436154)

[5.3 Project Risks – *Identify if there are any risks that you foresee.* 6](#_Toc138436155)

[6 PROJECT REFERENCES – Any previous projects you have referred. If yes, please share the details. 6](#_Toc138436156)

[7 APPROVALS 6](#_Toc138436157)

# 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

Because of increasing stress levels and changing external factors, parents are unable to bear a child using natural phenomena. Hence, In Vitro Fertilization (IVF) procedures are on the rise, which is part of assisted reproductive technologies (ART). However, the success rate of these procedures is also low due to high interobserver variability in grading the quality of embryos by embryologists and in some cases, patients come to know about the result after 4 months.

* Business Objective

Maximize the success rate of ART Procedures

* Business Constraint

Minimize the treatment cost

* Success Criteria:
  + - Business Success Criteria - Increase the success rate of ART procedures by at least 10%
    - Machine Learning Success Criteria – achieve at least by 95%
    - Economic Success Criteria - Achieve a cost saving of at least 25% by reducing the expenditure on working with embryos of lower grading.
* Data Collection: Update this section after the research is done
* Scope: If you are doing this for any specific department of the organization then please mention the same.
* Assumptions: E.g., Data will be provided by customer, Cloud & GPU will be provided by customer
* Risks: E.g., Required data might not be available; Server connectivity might be weak, etc.
* Costs: Project cost – You can do assumptions by putting [number of hours \* number of human resources (cadre wise) \* hourly cost]
* Timeline: High level timeline of the project. E.g., Project will be for 30 to 45 days.
* Approach: CRISP-ML(Q) / Data Analytics Project Management Methodology



# 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, Model Building for Association (Fuzzy Algorithm) and Recommendation | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2— Model Building for Association (Fuzzy Algorithm) and Recommendation |
| * Model Evaluation, tuning and insights, Deployment | * Deliverable 3.1— Model Evaluation, tuning and insights. * Deliverable 3. 2— Deployment |
| * Show case and review, Final Presentation and documentation, Handover and KT. | * Deliverable4.1 – show case and review * Deliverable4.2 – Final Presentation and documentation * Deliverable4.3 – Handover and KT |

## Deliverables Out of Scope

* Web Application

## Project Duration (start date: 02/04/2025 End date: 02/05/2025)

|  |  |  |  |
| --- | --- | --- | --- |
| **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. | [03/04/2025]  -  [05/04/2025] | * 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 | [06/04/2025]  -  [20/04/2025] | * 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 | [21/04/2025]  -  [28/04/2025] | * Deliverable 3.1— Model Evaluation, tuning and insights. * Deliverable 3. 2— Deployment | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [29/04/2025]  -  [02/05/2025] | * Deliverable4.1 – show case and review * Deliverable4.2 – Final Presentation and documentation * Deliverable4.3 – 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 AISPRAY for further analysis.
* 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 *– 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** Revanth Kumar R

Project Manager

**Approved by** Bharani Kumar Deepuru\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Sponsor

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

Executive Sponsor

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

Client Sponsor

