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Project Charter Document

Project Name: Data Science-Based Prediction of Embryo Quality for Fertility Outcomes

Department: Data Science Department

Focus Area: Artificial Intelligence in Reproductive Health / Embryo Image Classification / Predictive Modeling

Process: Embryo Image Data Collection Image Preprocessing

Prepared By

Document Owner(s)	Project/Organization Role
Ace Angelo Bueno	Data Scientist

Project Charter Version Control

Version	Date	Author	Change Description
1.0	10/20/25	Ace Angelo Bueno	Document created

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1 PROJECT CHARTER PURPOSE

The purpose of this project charter is to formally authorize and define the Data Science-Based Prediction of Embryo Quality for Fertility Outcomes project. This initiative aims to apply data science and deep learning techniques to develop a predictive model that classifies embryo images based on their quality and likelihood of successful implantation.

2 PROJECT EXECUTIVE SUMMARY

- project goals
- objectives
- scope
- assumptions
- risk
- timeline
- approach
- organization

3 PROJECT OVERVIEW

4 PROJECT SCOPE

4.1 Goals and Objectives

Goals	Objectives
To improve ART procedures	To develop and validate a deep learning model that predicts embryo quality with at least 85% accuracy, resulting in a 10% improvement in ART success rates.

4.2 Departmental Statements of Work (SOW)

Departmental SOW	Owner/Prime	Due Date/Sequence
Data Collection and preprocessing	Ace Angelo Bueno	October 21, 2025

4.3 Organizational Impacts

Organization	Impact to and Participation of Organization
Department of Data Science	The project will strengthen the department's research capabilities in artificial intelligence and biomedical data analysis

4.4 Project Deliverables

Milestone	Deliverable
1. Data Collection & Data Processing	• Project charter and research tracker template
2. Model Building	• Image classification. Use deep learning models(image classification models)
3.	•

4.5 Deliverables Out of Scope

-Real-Time Embryo Monitoring
-Integration with Hospital or Laboratory Systems
-Clinical Implementation or Testing
-Patient Data Analysis or Privacy Studies
-Cost-Benefit Implementation Study

4.6 Project Estimated Duration

Project Milestone	Date Estimate	Deliverable(s) Included	Confidence Level
Data Collection & Data Processing	October 21, 2025	Create project charter & Research tracker template	High
Model Building	October 28, 2025	Use Image Classifcation	High

5 PROJECT CONDITIONS

5.1 Project Assumptions

1. Sufficient high-quality, labeled embryo images will be available.
2. Image data is consistent in format and quality for analysis.
3. Required software, libraries, and computational resources are accessible.
4. Project scope remains limited to predictive modeling, no clinical trials.
5. Project lead has the necessary technical skills for AI model development.

5.2 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	Oct 21, 2025	4	Ace Bueno	Data Collection	Completed
2	Oct 28, 2025	4	Ace Bueno	Model Building	Completed

5.3 Project Risks

#	Risk Area	Likelihood	Risk Owner	Project Impact-Mitigation Plan
	Data Availability	Medium	Ace Bueno	Limited or low-quality images could reduce model accuracy.
	Resource Limitation	Low-Medium	Ace Bueno	Insufficient computational power may slow model training.

5.4 Project Constraints

Project must be completed immediately, using only anonymized embryo images and available computational resources.

6 Project Team Organization Plans

Project Team Role	Project Team Member(s)	Responsibilities
Project Lead / Researcher	Ace Angelo Bueno	- Lead project planning and execution - Collect, preprocess, and manage embryo image data

7 PROJECT REFERENCES

Milestone	Deliverable
Data Collection & Preprocessing	Preprocessed and organized embryo dataset
Model Building	Use Pre-trained image classification models

8 APPROVALS

Prepared by ____Deeksha_____

Project Manager

Approved by Sharat

Project Sponsor

_____

Executive Sponsor

_____

Client Sponsor

9 APPENDICES

9.1 Document Guidelines

9.2 Project Charter Document Sections Omitted