

Phase-1 Submission Template

Student Name: [Enter Your Name]

Register Number: [Enter Your Register Number]

Institution: [Insert College Name]

Department: [Enter Your Department Name]

Date of Submission: [Insert Date]

1.Problem Statement

[Describe the real-world problem you're trying to solve. Explain why this problem is important and worth solving]

2.Objectives of the Project

[Clearly define what you aim to achieve by the end of the project. Specify the key outcomes, insights, or predictions you intend to generate based on your analysis or model.]

3.Scope of the Project

[List the features you plan to analyze or build as part of the project. Also, specify any limitations or constraints, such as restrictions on deployment, use of only certain models, or reliance on specific datasets or tools.]

4.Data Sources

[Describe the dataset you will use in the project. Mention its source (e.g., Kaggle, UCI, APIs, synthetic, etc.), indicate whether it is public, private, or generated by you, and specify whether the dataset is static (downloaded once) or dynamic (updated in real-time).]

5.High-Level Methodology

[Outline each major step you'll follow in your project workflow. Address the following stages in detail

- **Data Collection** – *Explain how you will obtain the data (e.g., download, scrape, API access, generate synthetically).*
- **Data Cleaning** – *Identify potential issues such as missing values, duplicates, or inconsistent formats, and describe how you plan to address them.*
- **Exploratory Data Analysis (EDA)** – *Describe the techniques or visualizations you'll use to uncover patterns, trends, and relationships in the data.*
- **Feature Engineering** – *Indicate whether you will create new features or transform existing ones to improve model performance.*
- **Model Building** – *List the types of algorithms or models you plan to experiment with, and mention why they are suitable for your problem.*
- **Model Evaluation** – *Specify the metrics or validation strategies you will use to measure model accuracy and effectiveness.*
- **Visualization & Interpretation** – *Explain how you will present the key findings, insights, or predictions (e.g., charts, graphs, dashboards).*
- **Deployment** – *State whether you will deploy your project (e.g., as a web app, dashboard, or notebook) and briefly describe the method or tools you plan to use, if applicable.]*

6.Tools and Technologies

[List the tools, programming languages, and libraries you plan to use in your project. Include the following details

- **Programming Language** – *State the main language you will use (e.g., Python, R).*
- **Notebook/IDE** – *Mention the platform or environment you'll work in (e.g., Google Colab, Jupyter Notebook, VS Code).*
- **Libraries** – *List the key libraries you plan to use for data processing, visualization, and modeling (e.g., pandas, numpy, seaborn, matplotlib, scikit-learn, TensorFlow).*
- **Optional Tools for Deployment** – *If applicable, name any tools or frameworks you might use for deployment (e.g., Streamlit, Flask, Gradio, FastAPI).]*

7.Team Members and Roles

[List the team members involved in the project and clearly define their individual responsibilities. Specify who will be responsible for each of the tasks]