**Project Charter Document**



**Project Name:** Solar Panel Fault Detection using Machine Learning

**Department:** Energy and Resources Management

**Focus Area:** Facility Management

**Product/Process:** Fault Analysis



**Prepared By**

| **Document Owner(s)** | **Project/Organization Role** |
| --- | --- |
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**Project Charter Version Control**

| **Version** | **Date** | **Author** | **Change Description** |
| --- | --- | --- | --- |
| 1.0 | 10/01/2023 | venkata sai | Defining adjectives and scope of work, Project Overview |
|  |  |  |  |

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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

* Project goals
* Objectives
  + Data prepossessing
* Scope
* Assumptions
* Risks
* Costs
* Timeline
* Approach
* Organization



# PROJECT OVERVIEW



# PROJECT SCOPE

## Goals and Objectives

| **Goals** | **Objectives** |
| --- | --- |
| * To find buyer frequency pattern through transaction data and also build a Recommendation model | * A Vendor can efficiently predict customer purchase behavior faster, more efficiently and cost effectively. Predictive analysis in E – commerce helps decision makers in designing new business strategies which will help in overall growth of the business. |

## 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

* 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. | [15/09/2021]  -  [21/09/2021] | * 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 | [22/09/2021]  -  [28/09/2021] | * 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 | [29/09/2021]  -  [05/10/2021] | * Deliverable 3.1— Model Evaluation, tuning and insights. * Deliverable 3. 2— Deployment | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [06/10/2021]  -  []12/10/2021 | * 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

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

## Project Constraints



# Project Structure Approach



# Project Team Organization Plans

| * Deliverable 1.1— * Deliverable 1.2— * Deliverable 1.3— |
| --- |
| * Deliverable 2.1— * Deliverable 2.2— |
| * Deliverable 3.1— * Deliverable 3. 2— |
| * Deliverable4.1 – * Deliverable4.2 – * Deliverable4.3 – |



# PROJECT REFERENCES

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

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

Project Manager

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

Project Sponsor

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

Executive Sponsor

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Client Sponsor



# APPENDICES

## Document Guidelines

## Project Charter Document Sections Omitted

