**Project Charter**



**Project Name :** A Hierarchical Network-Based Method for Predicting Driver Traffic Violations

**Department :** Risk Analytics & Public Safety Intelligence

**Focus Area :** Predictive Analytics for Traffic Safety

**Product/Process :**  Product - A **Predictive Traffic Risk Intelligence System**



**Prepared By**

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

**TABLE OF CONTENTS**

**[1.](#_heading=h.sucff4yoctkt)****PROJECT CHARTER PURPOSE** 3

**[2.](#_heading=h.bt621ajr4s7u)****PROJECT OVERVIEW 3**

**[3.](#_heading=h.9z6ufx24pyud)****PROJECT SCOPE** 3

[4.1 Goals and Objectives](#_heading=h.rq1n8qflzlnc) 3

[4.2 Project Constraints](#_heading=h.dd6hyakghs5t) 3

[4.3 Project Success Criteria](#_heading=h.lwcxp130p2q0) 3

[4.4 Project Duration](#_heading=h.7okp74ozs97a) 3

**[4. PROJECT CONDITIONS](#_heading=h.q3zjwykjgvgy) 4**

[5.1 Project Assumptions](#_heading=h.us7ht9ksqdgj) 4

[5.2 Project Issues](#_heading=h.tafk13pcuont) 4

[5.3 Project Risks 5](#_heading=h.wr8hf8g1vf5g)

**[5. PROJECT REFERENCES](#_heading=h.z5cp63pyw68p) 5**

**[6. APPROVALS](#_heading=h.la0weypb5q7y) 5**

# 1. PROJECT CHARTER PURPOSE

The project charter outlines the scope, objectives, and overall strategy for completing the work. It plays a crucial role in initiating, planning, executing, monitoring, and evaluating the project. Serving as the primary reference, it details the project’s goals, scope, organizational structure, estimates, work plan, and budget. Additionally, it acts as a formal agreement between the Project Team and Project Sponsors, defining the deliverables within the agreed budget, timeline, risks, resources, and standards.



**2. PROJECT OVERVIEW**

This project aims to build a predictive analytics system that identifies when, where, and how traffic violations are likely to occur using a hierarchical network-based approach. By integrating traffic violation data, driver profiles, and weather conditions, the model uncovers patterns of high-risk behavior and violation hotspots. The system supports smarter law enforcement, better resource deployment, and improved awareness of environmental factors influencing road safety.



**3. PROJECT SCOPE**

1. **Goals and Objectives**

|  |  |
| --- | --- |
| **Goals** | **Objectives** |
| To develop an AI-driven predictive analytics system using a hierarchical network-based method that accurately forecasts driver traffic violations by analyzing driver behavior, location, time, and environmental factors—enabling proactive enforcement, improved road safety, and optimized allocation of traffic policing resources. | * Maximize road safety by finding places, times, and driver behaviors that often lead to violations. * Minimize wasted police effort by predicting when and where traffic rules are most likely to be broken. * Maximize awareness of how weather affects traffic violations to help plan safety measures in bad weather. |

## Project Constraints:

* Minimize wrong predictions to avoid unnecessary police checks.
* Minimize the time and cost needed to run the model

## **Project Success Criteria:**

**Business Success Criteria:**

* Reduce police response time to high-risk areas by at least 40%.
* Improve detection of traffic violation hotspots by 30% compared to current methods.

**Economic Success Criteria:**

* Save on patrol fuel and manpower by using data-driven deployment plans.
* Achieve measurable safety and cost benefits from the model within 6–12 months of use.

**Machine Learning Success Criteria:**

* Model should reach at least 85% accuracy in predicting traffic violations.

• Show a strong link between weather and violations (correlation ≥ 0.7).

## Project Duration (Start date: End date: )

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Milestone** | **Date Estimate** | **Deliverable(s) Included** | **Confidence Level** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |



**4. PROJECT CONDITIONS**

## Project Assumptions

## Project Issues

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **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] |  |  |



**5. PROJECT REFERENCES**

|  |  |
| --- | --- |
| **Milestone** | **Deliverable** |
| [ |  |
|  |  |
|  |  |



**6. APPROVALS**

**Prepared by**

Project Manager

**Approved by**

Project Sponsor

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

Executive Sponsor

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

Client Sponsor

