Project Plan

Traffic Penalty Management Software

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# Introduction

## Background

## Scope

## Document contents

*Include some background information about the problem, the scope and what this document will contain.*

# Work Breakdown Structure

*WBS’s are usually presented as some kind of hierarchical diagram/chart etc. The details what is involved each work unit should be provided in section 3:* ***Activity Definition***

*You do NOT need to do a WBS Dictionary for this project – the activity definition (whilst slightly different) will suffice. The WBS is focussed on SCOPE. The Activity definition is focussed on TIME.*

**Initiation**

Dataset

Evaluation

Visual design

Structural Design

Update plan

Weekly status report

Use cases

Software requirementsts

User requirements

Requirement specifications

**Analysis**

Time estimation and budget

Scheduling

Work Breakdown Structure

Scope statement

**Project** Planning

UI design

Wireframe

**Traffic Penalty Software Management**

**Design**

**Controlling**

# Activity Definition & Estimation

*From your WBS, define the activities required for your project. You will revise this document and add more detail for part B as you discover more about the project.*

*Each activity should be clearly identified by a number and should match up to your Gantt chart. You should provide some estimations for the time you think each activity will take. This should make it easy to prepare your Gantt chart.*

**3.1 Initiation**  
The initiation stage is the first phase of the project management lifecycle, where the project's objectives, scope, stakeholders, and initial planning are defined. The project aims to develop a machine-learning model for predicting traffic penalty. The two key activities in this initiation stage are "Datasets" and "Evaluation."

Activity 1: Datasets Gathering Objective: The purpose of this activity is to collect and assemble the necessary datasets required for training and testing the machine learning model. The tasks in this activity include:

* 1. **Identify Data Sources:** Collaborate with relevant departments and stakeholders to identify potential data sources. This could include sales data, customer behaviour logs, product information, and demographic data.
  2. **Data Collection:** Gather the identified datasets from various sources, ensuring data accuracy, relevance, and completeness.
  3. **Data Quality Assurance:** Perform data validation and cleansing to identify and rectify inconsistencies, errors, or missing data points.
  4. **Data Storage and Organization:** Create a centralized data repository with proper organization and categorization for easy access during the model development phase.
  5. **Data Documentation:** Document the metadata and characteristics of each dataset, including its origin, format, structure, and any preprocessing steps performed.

The deliverables from this activity are as follows:

* Comprehensive datasets with relevant customer behaviour and product data.
* Documented data sources, attributes, and any data preprocessing steps.

Activity 2: Evaluation Objective: This activity involves evaluating the feasibility, potential risks, and alignment of the project with organizational goals. The tasks in this activity include:

1. **Feasibility Assessment:** Analyse the technical, financial, and operational feasibility of the project. Assess the available resources, expertise, and infrastructure required for successful model development.
2. **Risk Identification:** Identify potential risks and challenges that could affect the project's progress or outcome. These could include data quality issues, resource constraints, technical complexities, and external factors.
3. **Stakeholder Alignment:** Engage key stakeholders to ensure their understanding of the project's objectives and to gather their input regarding expectations, requirements, and concerns.
4. **Project Charter:** Create a preliminary project charter outlining the project's scope, objectives, deliverables, high-level timeline, and initial resource allocation.
5. **Cost-Benefit Analysis:** Perform a preliminary assessment of the potential benefits the project could bring compared to the costs and resources required.

From this activity, our deliverables are:

* Feasibility analysis report detailing technical, operational, and financial feasibility.
* Risk register outlining identified risks and potential mitigation strategies.
* Stakeholder input and expectations documented.
* Preliminary project charter with key project details.
* Cost-benefit analysis report.  
  1. **Project**

The project stage focuses on the detailed planning and setup required to initiate and execute the project. The key activities in this stage are "Scope Statement," "Work Breakdown Structure (WBS)," "Scheduling," "Time Estimation," and "Budget."

Activity 1: Scope Statement Objective: Define and document the project's scope, objectives, deliverables, and boundaries. The tasks during this stage include:

* Project Objectives: Clearly outline the goals and objectives the project aims to achieve.
* Scope Definition: Define the boundaries of the project, specifying what is included and excluded from the scope.
* Deliverables: Identify and describe the tangible and intangible outcomes the project will produce.
* Constraints and Assumptions: Document any limitations, assumptions, and constraints that may impact the project's scope and execution.

On completion of this phase, our objective is to provide a project scope statement document detailing objectives, scope boundaries, deliverables, and constraints.

Activity 2: Work Breakdown Structure (WBS) Objective: Break down the project's scope into manageable work packages, tasks, and sub-tasks. The tasks during this activity include:

* Decomposition: Break down the project's scope into smaller, manageable components using a hierarchical structure.
* Task Identification: Identify specific tasks and activities required to complete each work package.
* Dependencies: Define logical relationships and dependencies between tasks to establish the project's sequence.
* WBS Documentation: Create a visual representation of the WBS, illustrating the project's hierarchical breakdown.

On completion of this phase, our objective is to develop a Work Breakdown Structure diagram depicting project components, tasks, and dependencies.

Activity 3: Scheduling Objective: Create a detailed project schedule that outlines the sequence, duration, and dependencies of project tasks. The tasks during this activity include:

* Task Sequencing: Arrange tasks in a logical order to ensure smooth project flow.
* Task Duration Estimation: Estimate the time required to complete each task based on historical data, expert judgment, and other relevant factors.
* Critical Path Analysis: Identify the critical path – the sequence of tasks that determines the shortest project duration.
* Schedule Visualization: Develop a Gantt chart or timeline to visually represent the project schedule.

On completion of this phase, our objective is to develop a Project schedule with task sequence, start and end dates, and critical path highlighted.

Activity 4: Time Estimation and Budget Objective: Estimate the time required for each task and allocate resources to develop a project budget. The tasks during this activity include:

* Time Estimation: Calculate the total project duration by summing up the estimated durations of individual tasks.
* Resource Allocation: Assign appropriate resources (human, equipment, materials) to each task based on expertise and availability.
* Cost Estimation: Estimate the costs associated with each task, including labour, materials, equipment, and any other relevant expenses.
* Budget Preparation: Develop a comprehensive project budget by aggregating the estimated costs.

On completion of this phase, our objective is to estimate a Project time estimation report outlining task durations and resource allocation. From the time estimation, we will develop a Detailed project budget document with a cost breakdown.

* 1. Analysis
  2. Design
  3. Controlling

# Gantt Chart

*This section should contain your Gantt chart. The items in the Gantt chart should match the activity definition from section 3. You should also submit your Gantt chart file separately.*