Project Plan

NSW Traffic Penalty Visualizer

Student Names

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# Introduction

## Background

For this project, the intent is to create a tool for the visualization of data from several pre-chosen data sets. Out of the options given, I have chosen to use NSW Traffic Penalty Data.

This project will aim to provide a user-friendly and robust tool for extracting meaningful insights from the dataset. These insights will help traffic authorities, policymakers and the public better understand and address traffic-related issues.

## Scope

The scope of this project encompasses the following key features and functionalities:

* Reporting Penalty Information: The tool will allow users to retrieve detailed information on penalty cases for a user-selected period.
* Charting Offense Distribution: Users will be able to generate visualizations that display the distribution of penalty cases by offense code for a user-selected period.
* Retrieving Radar and Camera Cases: The tool will provide the capability to retrieve all penalty cases captured by radar or camera based on offense description for a user-selected period.
* Mobile Phone Usage Analysis: We will analyse penalty cases related to mobile phone usage, including trends over time, offense codes, and other relevant factors.
* Additional Insight or Analysis Tool: We will incorporate an additional analysis tool of our choice to further enhance the utility of the platform.

## Document contents

This Project Plan document is structured as follows:

* Section 1.0 Introduction: Provides an overview of the project’s purpose, problem background, scope, and document contents (This section).
* Section 2.0 Work Breakdown Structure: Outlines the tasks and activities required to complete the project, including data preprocessing, user interface development, reporting, chart generation, retrieval of cases, mobile phone usage analysis, and additional insight tools.
* Section 3.0 Activity Definition & Estimation: Details the descriptions and estimated Durations for each task defined in the Work Breakdown Structure.
* Section 4.0 Gantt Chart: Presents a visual representation of the project timeline, including task dependencies and milestones.

# Work Breakdown Structure

## Data Preprocessing

Task 1: Document the preprocessing steps that have already been applied to the collected data, ensuring it’s clean and well-structured for analysis

## User Interface Development

Task 2: Create a user Interface (UI) to input user-selected periods.

## Reporting Penalty Information

Task 3: Develop functionality to report penalty information for a user-selected period

## Chart Generation

Task 4: Generate charts to show the distribution of cases in each offense code for a user-selected period.

## Retrieving Cases

Task 5: Implement a feature to retrieve all cases captured by radar or camera based on offense description for a user-selected period.

## Mobile Phone Usage Analysis

Task 6: Analyse cases caused by mobile phone usage, including trends over time and offense codes.

## Additional Insight or Analysis Tool

Task 7: Develop an additional insight or analysis tool of your choice. Specify the details of this tool.

# Activity Definition & Estimation

In this section, we define the tasks and activities required for the successful execution of the project. For each task, we provide a description and estimate the time and resources needed.

Task 1: Data Preprocessing

Description: This task involves ensuring the dataset is in a state that is conducive to operating the program. Given that the dataset seems to already be in a suitable state for parsing, this activity may require no time at all.

Estimated Duration: N/A To 1-2 Days

Resources:

* Dataset
* Data Analyser

Task 2: User Interface Development

Description: This task involves the design and development of a user-friendly interface that allows users to input specific time periods of interest. The UI should be intuitive and provide users with the flexibility to select the time frames they want to analyse. Consider user experience and design principles during UI Development.

Estimated Duration: 1-2 Weeks

Resources:

* UI/UX Design Elements
* Design Programs for Custom Assets

Task 3: Reporting Penalty Information

Description: In this task, we will create the functionality to extract and present penalty information based on user-selected time periods. Users should be able to input a specific period, and the tool will retrieve and display relevant penalty data, including offense code, dates, and locations, in a structured report format.

Estimated Duration: 1-2 Weeks

Resources:

* Software Development Tools

Task 4: Chart Generation

Description: This task involves developing chart-generation capabilities that will visually represent the distribution of penalty cases by offense code for user-selected time periods. Users should be able to view clear and informative charts to better understand the data

Estimated Duration: 2 – 3 Weeks

Resources:

* Software Development Tools
* Chart Visual Elements

Task 5: Retrieving Cases

Description: This task focuses on creating a feature that allows users to retrieve penalty cases captured by radar or camera based on offense descriptions for user-selected time periods. The feature should facilitate efficient searches and present relevant case details.

Estimated Duration: 2 – 3 Weeks

Resources:

* Software Development Tools
* UI Assets for Organising Cases

Task 6: Mobile Phone Usage Analysis

Description: In this task, we will analyse penalty cases related to mobile phone usage. The analysis will include identifying trends over time, offense codes associated with mobile phone usage violations, and other relevant factors. The goal is to gain insights into this specific aspect of traffic penalties.

Estimated Duration: 2-3 Weeks

Resources:

* Software Development Tools

Task 7: Additional Insight or Analysis Tool

Description: For the additional Insight or Analysis Tool, I’m going to go with an Overview format, showing a distribution of all forms of cases to allow the user to gain a broader understanding.

Estimated Duration: 1-2 Weeks

Resources:

* Software Development Tools

# Gantt Chart

A graph with a bar chart

Description automatically generated with medium confidence