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| New South Wales Traffic and Penalty Analysis Tool Executive Summary |
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# Abstract

# Our comprehensive report explores the New South Wales Traffic and Penalty Analysis Tool, successfully implementing various features. These includes user-defined period analysis, offence distribution visualization, retrieval of camera and radar captured cases, mobile phone usage analysis, and financial assessment of penalties. These features empower users to gain valuable insights into traffic penalties, enabling informed decision-making and resource allocation. Moreover, the tool offers user-friendly interfaces and prioritize ease of use, allowing users with varying levels of technical expertise to navigate its capabilities effectively. The intuitive design streamlines data retrieval and visualization processes, making it accessible for all users. In accordance with the functionality requirements, our system has successfully addressed the majority of the specified criteria. However, the implementation of the ‘Download’ button remains outstanding. This attributed to technical challenges there were encountered during the development process.

# Introduction

# This comprehensive report delves into the New South Wales Traffic and Penalty Analysis Tool, known as Traffic Tools, focusing on its multifaceted capabilities and user-friendly interfaces. The primary aim of this report is to thoroughly explore Traffic Tools, emphasizing its potential to provide users with valuable insights into traffic penalties. The report showcases the successful implementation of diverse features, each examined over a significant 12-minth timeframe. This duration offers a comprehensive historical perspective on traffic offences in New South Wales. Throughout the report, we thoroughly conduct various analysis tasks, designed to uncover distinct aspects of traffic penalties. From generating detailed tables and charts to assessing financial data, these tasks aim to equip users with the knowledge needed for informed decision-making and resource allocation. As we progress through the report, we will delve into each analysis task, presenting findings and implications in detail.

# A screenshot of a computer Description automatically generated**Analysis 1 Overall Report**

The image displayed above illustrates the “Overall Report” feature, showcasing a comprehensive dataset spanning 12 months, from January 1, 2012, to December 31, 2012, as per the user’s selected timeframe. This dataset encompasses a wealth of information, including offence codes, offence descriptions, legislative, camera indicators, and more. The user interface for this functionality is designed for clarity and simplicity. Users are required to input their desired time frame and then initiate the generation of the table with a single ‘Submit’ button press.

# **A screenshot of a pie chart Description automatically generatedAnalysis 2 Chart Distribution**

The image depicted above presents the “Chart Distribution” functionality, highlighting an extensive dataset spanning a year, commencing on January 1, 2013, and concluding on December 31, 2013, in alignment with the user’s chosen time frame. This dataset incorporates offence codes alongside corresponding offence descriptions, providing additional clarity regarding the description. The user interface for this feature prioritizes clarity and user-friendliness. Users simply input their preferred time frame and trigger chart generation with a single click on the ‘Submit’ button. As evident from the data, the three most prevalent offence cases observed within the selected timeframe are as follows: ‘8404 – Park continuously for longer than permitted’ at 20.7%, ‘9585’ at 16.8%, and ‘74701’ at 16.1%.’

# **Analysis 3 Cases Captured**

The image shown above illustrates the “Cases Captured” feature, displaying a dataset covering from January 1, 2014, to December 31, 2014, based on the user’s selected timeframe along with the ‘Camera’ and ‘Motor Vehicle’ as a selected filter to generate the data. This dataset includes offence month, offence code, offence description, and so on. The user interface for this function is designed and ordered with a focus on clarity and ease of use. Once users input their desired time frame and option, then initiate table generation with ‘Submit’ button. The data clearly demonstrates that the filtering mechanism function as specified. Significantly, when examining the offence description filter, it exclusively retrieves cases related to ‘Motor Vehicle’.

# **A screen shot of a graph Description automatically generatedAnalysis 4 Cases Analyze**

The visual representation above showcases the “Cases Analyze” functionality, presenting a dataset that encompasses the period from January 1, 2012, to December 31, 2012, as per the user’s specified offence code and timeframe. This dataset includes offence code related to Mobile Usage as per selected by user and offence description on the top left of the graph for clarification. The user interface of this function is prioritizing clarity and user-friendliness. Users can effortlessly specify their desired timeframe and initiate the graph generation process with click on ‘Plot’ button. As evident from the data presented above, it illustrates the temporal trend of offence case ‘64586: Drive using a hand-held mobile phone’.

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# **Analysis 5 Financial Analysis**

The image depicted above presents the “Financial Analysis” functionality, highlighting an extensive dataset spanning a year, commencing on January 1, 2013, and concluding on December 31, 2013, as per the user’s selected timeframe and categories. This dataset including the detail of categories per selected and total value in descending order. The user interface is user-friendly and intuitive, as it necessitates the input of a time frame and categories through a dropdown menu and initiate the table generation process with click on ‘Submit’ button. The provided user filter retrieves data concerning location details and total value as can be seen by image above.