**Project Title:** Crime Analysis in Victoria

**Team Members**

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**Project Description/Outline**

To find out patterns of crime happening around Victoria and the link of crime rate with economic indicators (unemployment rate, inflation rate).

**Research Questions to Answer**

* Find the common types of crime occurring in Victoria- The type/category of crime committed the most.
* The Local Government Area (LGA) with most crimes.
* The rate of crime per LGA over the last 10 years
* Find the link between economic factors such as inflation, unemployment rate with crime rates. (from 2019-2023).

**Datasets to Be Used**

* Crime Statistics data from Crime Statistics Agency (CSA)-data available in Victoria Police website
* Monthly inflation and unemployment rate from ABS

**Rough Breakdown of Tasks**

* Getting the data from relevant sources (ABS, CSA)
* Data cleaning/filtering data
* Identify data variables of interest.
* Create data frames.
* Creating relevant charts to visualise data:

1. Bar Chart for all LGAs of crime rate per 100,000 population for year 2023 (data from table 1)
2. Bar Chart for top 10 LGAs of crime rate per 100,000 population for year 2023 (data from table 1)
3. Line charts for top 10 LGAs of crime rate per 100,000 population for the years 2014-2023 (data from table 1)
4. Bar chart for top 10 offence subgroup of LGA crime rate per 100,000 population for year 2023 (data from table 2, column G ‘Offence Subgroup’)
5. Line charts for top 10 offence subgroup of LGA crime rate per 100,000 population for the years 2014-2023 (data from table 2)
6. See if it is possible to make pie chart for ‘Offence division’ (column E table 2) for 2023. There are only 6 major subcategories for Offence division’. A pie chart may look good but it may be confusing to sort/filter data as ‘LGA Rate per 100,000 population’ relates to data in column G (‘Offence subgroup).

* Regression analysis with ANOVA test or T test to find relationship between economic factors and LGA crime rate per 100,000 population. Independent variables= unemployment rate, inflation rate. Dependent variable = LGA Rate per 100,000 population
* Identifying trends and studying findings from the analysed data
* Writing inferences and conclusions based on our research questions