

AU Crime Stats: Introduction

WE'LL COVER THE FOLLOWING



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Best Australian Cities - Least Crimes

There's no doubt that Australia is one of the most beautiful places in the world! The land 'Down Under' has no shortage of opulent beaches, sweeping deserts, dense forests, and endless valleys, but for an overseas visitor, these areas are just waiting to be uncovered. Australia comprises the mainland of the Australian continent, the island of Tasmania and numerous smaller islands. It is the world's sixth-largest country by total area.

However, as soon as you decide to visit a country, the first question that comes into your mind is what would be the safest place/city to visit? In each country, each city has its own characteristics, crime rates, etc. and the same is valid for Australian cities also.

Fortunately, Australia has a number of federal agencies that have an enforcement role, these can be broken into law enforcement agencies and regulatory agencies. In particular, there are two distinct, but similar levels of police force, the various state police forces and the Australian Federal Police (AFP). The state police forces are responsible for enforcing state law within their own states while the AFP are responsible for the investigation of crimes against Commonwealth law which occurs throughout the nation.

Video lecture: AU crime data stats (data preview)

In this project, mining a historical dataset (2013, time range unknown) provided by the AFP we will address the following questions:

- What is the top most crime type in Australia by the total number of crimes in all major cities?
- Same question as above, but this time, per city?
- What is the average number of crimes, per city?
- Which city had the least crimes? or, in other words, what's the best city in Australia in terms of crimes?

Even though the dataset is not big, mining this (toy) we will be able to develop our initial skills in Bash and `.csv` data processing.

Learning objectives

By completing this project, you will learn to use the following Bash commands:

- Advanced use of the Bash commands: `cat`, `head`, `tail`, `sort`, `wc`;

- Bash `function` creation;
- Bash `if-else`;
- Bash `for-loop`; and a
- `sed`, `awk` and the use of regular expressions.

The chapter ends with a full bash script that we use to find the best city in Australia in terms of number of crimes that happened pre-2013.

This will create a folder `afpdata` on your Desktop. Next, we'll download our dataset from the data.gov.au web portal, which provides an easy way to find, access and reuse public datasets from the Australian Government. To learn more, go to <https://data.gov.au/about>. Generally, material presented on this website is provided under a Creative Commons Attribution 3.0 Australia licence. In this project, we collect and use a dataset originally contributed by the AFP - Australian Federal Police in the data.gov.au. Once you visit the portal, click on search with the string `"afp crime"`, you will get a link to download the data.

Data download

You should download the data from [this \(educative.io\)](https://educative.io) web page, as we have slightly simplified the data.