HW1

1. Chicago crime dataset.

問題定義：在芝加哥平均每一天會有十個人受到槍擊，意即當地的犯罪率不低，若能針對犯罪發生的地區以及原因加以分析並預測，有效針對特定地區做防護，防患未然。

潛在問題：人民對於城市的安全性有所疑慮，無法安心居住．分析犯罪動機及犯罪類型，及尋找出引導人們犯罪的主因。

分析與預測難度：難，因犯罪牽涉到犯罪人的心理以及發生的契機。若是不定期沒有規則性地進行犯罪，則有可能更難以預測。且若犯罪人都不同，契機不同的情況下對於犯罪的位置及原因也會有所變動。

價值：中等，若能有效預測犯罪人或是犯罪區域，並且防範未然，則可能有效降低犯罪率，也使得居民可以在城市中居住的更加安心．

1. 台南市的公車搭乘率，設置的公車站牌位置的觀光人潮數量及發車位置：

在台南市，公車雖然可以到達不少地點，但是班次過少以至於平時無法考慮公車來做為交通工具，若能根據觀光景點以及特別的時間增開班次則可能有效提高搭乘率，也可以讓台南市成為更加便利的城市，進而再提高觀光產值．

附錄原文：

Context

Approximately 10 people are shot on an average day in Chicago.

<http://www.chicagotribune.com/news/data/ct-shooting-victims-map-charts-htmlstory.html><http://www.chicagotribune.com/news/local/breaking/ct-chicago-homicides-data-tracker-htmlstory.html><http://www.chicagotribune.com/news/local/breaking/ct-homicide-victims-2017-htmlstory.html>

Content

This dataset reflects reported incidents of crime (with the exception of murders where data exists for each victim) that occurred in the City of Chicago from 2001 to present, minus the most recent seven days. Data is extracted from the Chicago Police Department's CLEAR (Citizen Law Enforcement Analysis and Reporting) system. In order to protect the privacy of crime victims, addresses are shown at the block level only and specific locations are not identified. This data includes unverified reports supplied to the Police Department. The preliminary crime classifications may be changed at a later date based upon additional investigation and there is always the possibility of mechanical or human error. Therefore, the Chicago Police Department does not guarantee (either expressed or implied) the accuracy, completeness, timeliness, or correct sequencing of the information and the information should not be used for comparison purposes over time.

Update Frequency: Daily

Fork [this kernel](https://www.kaggle.com/paultimothymooney/starter-kernel-for-chicago-crime-dataset) to get started.

Acknowledgements

<https://bigquery.cloud.google.com/dataset/bigquery-public-data:chicago_crime>

<https://cloud.google.com/bigquery/public-data/chicago-crime-data>

Dataset Source: City of Chicago

This dataset is publicly available for anyone to use under the following terms provided by the Dataset Source —[https://data.cityofchicago.org](https://data.cityofchicago.org/) — and is provided "AS IS" without any warranty, express or implied, from Google. Google disclaims all liability for any damages, direct or indirect, resulting from the use of the dataset.

Banner Photo by [Ferdinand Stohr from Unplash](https://unsplash.com/photos/EK8DxK_7IwY).

Inspiration

What categories of crime exhibited the greatest year-over-year increase between 2015 and 2016?

Which month generally has the greatest number of motor vehicle thefts?

How does temperature affect the incident rate of violent crime (assault or battery)?