DATA SCIENCE COURSE

PROJECT IDEAS

OUTREACH OF SG GOVT'S STATEMENTS IN INDONESIA

▸**The Problem:**

▸To examine the kind of statements that will have the best outreach in Indonesian media

▸**Data** - must be gathered

▸(A) Singapore Government statements on Indonesia - searchable by keywords

▸(B) A self-developed web crawler that goes through the news websites in Indonesia

▸**Limitation:** We will not know whether the news is positive, neutral or negative

▸**Hypotheses**

▸Null Hypothesis: SG Government statements are of no interest to the Indonesian media

▸Alternative Hypothesis: Certain statements do get reported in the Indonesian media

IN PURSUIT OF HAPPINESS

▸**The Problem:**

▸To examine the relationship between Happiness Score and Social Factors (corruption, life expectancy, government expenditure per student, secondary (% of GDP per capita), urban population) and Environmental Factors (average surface temperature, PM2.5 air pollution)

▸**Data:**

▸(A) World Happiness Report from the Sustainable Development Solutions Network https://www.kaggle.com/unsdsn/world-happiness

▸(B) http://data.worldbank.org/indicator - for the factors above in bold

▸(C) Earth Surface Temperature Data from Berkely Earth https://www.kaggle.com/berkeleyearth/climate-change-earth-surface-temperature-data

▸**Hypotheses**

▸Null Hypothesis: There is no association between the above factors and the Happiness Score

▸Alternative Hypothesis: There is an association between Happiness Score and the above factors

JOB VACANCY AND GRADUATES IN SINGAPORE

▸**The Problem:**

▸Forward-planning ability of autonomous universities in Singapore

▸Examine the relationship between the number of graduates of a given year, and the number of job vacancies of the year after. Through the relationship, we can see whether there is a mismatch between graduates and jobs available.

▸**Data: data.gov.sg**

▸(A) Number of graduates by a university course from 1993 to 2014

▸(B) Number of job vacancies by Industry and Broad Occupational Groups from 1990 to 2016

▸**Assumption:** Job vacancies suitable for graduates is proportional to the number of jobs for PMETs

▸**Hypotheses**

▸Null Hypothesis: Autonomous universities are not able to forward plan, since the number of graduates is always larger than the number of job vacancy in a particular sector

▸Alternative Hypothesis: Autonomous universities are able to forward plan