1. **Project Title**: The “EriTufJohMik’ Project re Mental Health Trends in Technology
2. **Team Members**: Erica Hoshino

Tuflika Putri

John Nasiakos

Mike Murphy

1. **Project Description**:

The project uses John Hopkins University Covid-19 datasets and related datasets to determine the statistical significance of the relationship between being vaccinated or unvaccinated and the mortality from Covid\_19.

The project tries to answer the following questions.

1. **Research Questions**:
2. What is the relationship between “unvaccinated” Covid patients versus “vaccinated” Covid patients for the following categories in selected countries?
   1. Covid vaccination rates per country
   2. Total Covid cases
   3. Total Covid hospitalisations
   4. Total covid cases recovered
   5. Total Covid deaths
   6. Mortality rates - per 100,000 population
   7. Mortality rates – case / fatality ratio
3. What countries / areas will be most impacted?
4. What countries / areas will be least impacted?
5. **Hypotheses**:

The alternative hypothesis (Ha) is that there is a significant correlation between vaccination status (vaccinated or unvaccinated) and death for Covid patients.

The null hypothesis (H0) is that there is not a significant correlation between vaccination status (vaccinated or unvaccinated) and death for Covid patients.

1. **Visualisations / Analysis**:

The visualisations used are:

1. Pie charts vaccinated vs unvaccinated per country
   1. Bar chart vaccination rates per country
   2. Bar chart total Covid cases per country
   3. Bar chart total Covid hospitalisations per country (if possible)
   4. Bar chart total covid cases recovered per country
   5. Bar chart total Covid deaths per country
   6. Bar chart total mortality rates - per 100,000 population per country
   7. Bar chart total mortality rates - case / fatality ratio per country

Correlation and regression analysis follows proposed visualisations.

1. **Project Datasets**:

The datasets for the project can be found at the following links.

“JHU – Time Series Daily Reports”

<https://raw.githubusercontent.com/CSSEGISandData/COVID-19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv>

“JHU – Daily Reports”

<https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data/csse_covid_19_daily_reports>

JHU link on how to use their data – accesses cases, vaccinations, and testing data

<https://coronavirus.jhu.edu/about/how-to-use-our-data>

“World population data”

<https://www.worldometers.info/world-population/population-by-country/>

“Vaccination rates per country”

<https://ourworldindata.org/covid-vaccinations?country=AUS>

1. **Methodology**:

* The project commenced with a one-off download of a dataset covering some 32 days of data from the John Hopkins University Covid datasets identified above.
* It then evolved to dynamically downloading the John Hopkins University Covid Time Series datasets using URLS and Wget so that it picks up the most recent data when run.
* Time permitting, further analysis needs to be done to fully complete the assessments we set out to do.

1. **Conclusions / Implications**:

* Our analysis is a work in progress. It shows that there is a relationship between vaccination status (vaccinated or unvaccinated) and death for Covid patients.
* The relationship is not the significant correlation that might be expected.
* Further analysis of the datasets and further statistical analysis needs to be done to quantify the extent of this relationship.
* This further analysis is dependent on the rigours of the Monash Data Analytical Bootcamp and its homework demands.
* Erika’s implications go here

* John’s implications go here