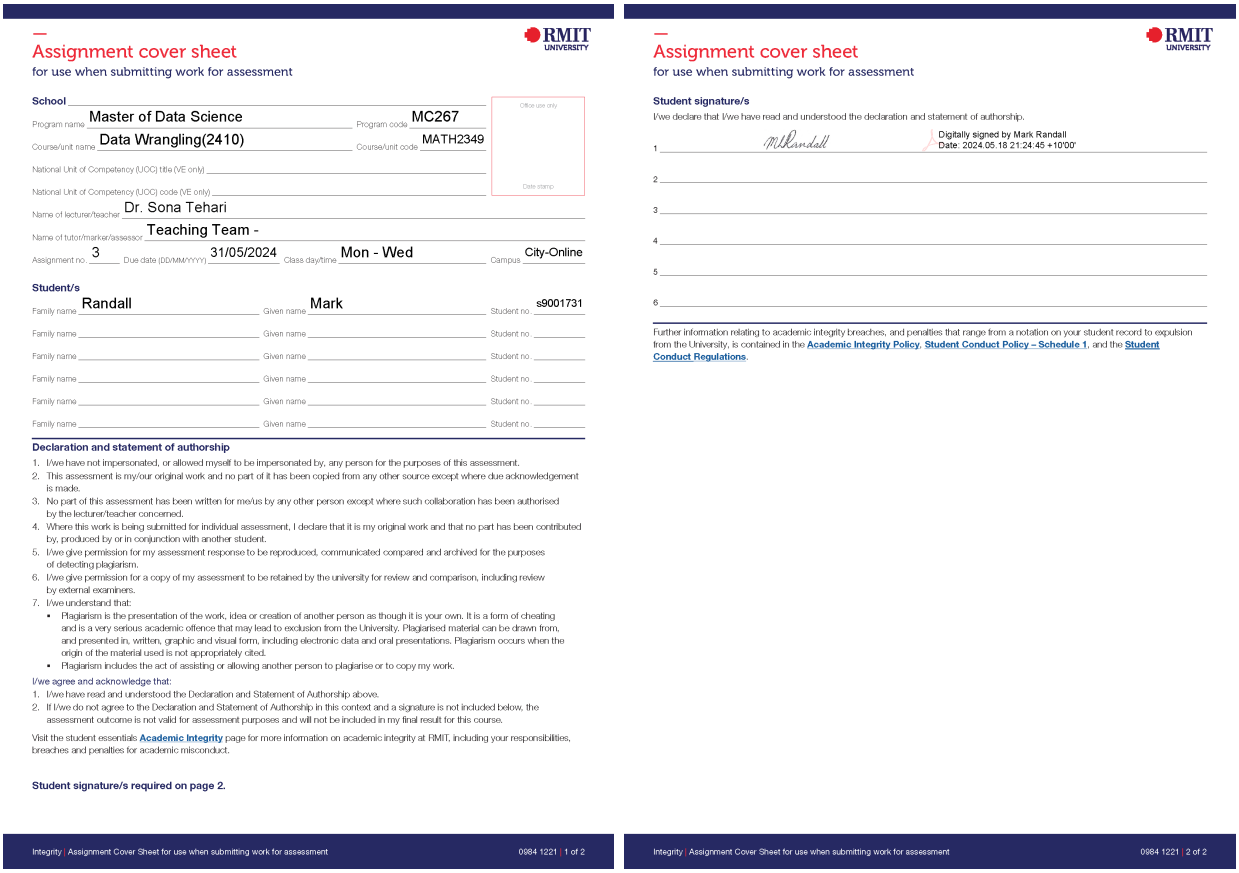
Data Wrangling (Data Preprocessing)

Practical assessment 2

s9001731 Mark randall

2024-05-22



Assignment cover sheet

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School

Program name: Master of Data Science — Program code: MC267

Course/unit name: Data Wrangling(2410) — Course/unit code: MATH2349

National Unit of Competency (UOC) title (VE only)

National Unit of Competency (UOC) code (VE only)

Office use only — Date stamp

Name of lecturer/teacher: Dr. Sona Tehari

Name of tutor/marker/assessor: Teaching Team -

Assignment no.: 3 — Due date (DD/MM/YYYY): 31/05/2024 — Class day/time: Mon - Wed — Campus: City-Online

Student/s

Family name: Randall — Given name: Mark — Student no.: s9001731

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Student names, numbers and percentage of contributions

Table 1: Group information

Student name	Student number	Percentage of contribution
Mark Randall	s9001731	100

Library Load

Package 1 : OpenStreetMap (Fellows & JMapViewer library by Jan Peter Stotz 2023)
Package 2 : tidyterra (Hernangómez 2024)
Package 3 : maptiles (Giraud 2024)
Package 4 : sf (Pebesma 2024)
Package 5 : sn (Azzalini 2023)
Package 6 : stats4 (R Core Team 2024a)
Package 7 : moments (Komsta & Novomestky 2022)
Package 8 : ggnewscale (Campitelli 2024)
Package 9 : Hmisc (Harrell Jr 2024)
Package 10 : validate (van der Loo & de Jonge 2024)
Package 11 : deducorrect (van der Loo, de Jonge & Scholtus 2015)
Package 12 : editrules (de Jonge & van der Loo 2024)
Package 13 : igraph (Csárdi et al. 2024)
Package 14 : deductive (van der Loo & de Jonge 2021)
Package 15 : tidyselect (Henry & Wickham 2024)
Package 16 : rvest (Wickham 2024)
Package 17 : here (Müller 2020)
Package 18 : glue (Hester & Bryan 2024)
Package 19 : magrittr (Bache & Wickham 2022)
Package 20 : lubridate (Spinu, Grolemund & Wickham 2023)
Package 21 : forcats (Wickham 2023a)
Package 22 : stringr (Wickham 2023b)
Package 23 : purrr (Wickham & Henry 2023)
Package 24 : tibble (Müller & Wickham 2023)
Package 25 : ggplot2 (Wickham et al. 2024)
Package 26 : tidyverse (Wickham 2023c)
Package 27 : kableExtra (Zhu 2024)
Package 28 : knitr (Xie 2024)
Package 29 : readxl (Wickham & Bryan 2023)
Package 30 : readr (Wickham, Hester & Bryan 2024)
Package 31 : dplyr (Wickham et al. 2023)
Package 32 : tidyr (Wickham, Vaughan & Girlich 2024)
Package 33 : openxlsx (Schauberger & Walker 2023)
Package 34 : stats (R Core Team 2024b)
Package 35 : graphics (R Core Team 2024c)
Package 36 : grDevices (R Core Team 2024d)
Package 37 : utils (R Core Team 2024e)
Package 38 : datasets (R Core Team 2024f)
Package 39 : methods (R Core Team 2024g)
Package 40 : base (R Core Team 2024h)

Abstract

"Most vehicular accidents in Victoria involve a male driver between 18 to 30 years of Age and a high powered car."

This project will use some empirical data collected by the Victorian State Government(Vic 2024) to examine

this statement.

Executive Summary

The Victoria Road Crash Data URL(Vic 2024) contains nine comma-separated value (csv) and one geo spatial java script object notation (GeoJSON) file. These were downloaded to a Data folder for examination. The files are:

```
csvFileNames <- list.files("../../Data",pattern = "*.csv", full.names = TRUE)
fullFileNames <- list.files("../../Data", full.names = TRUE)
for (file in fullFileNames) {
  cat(paste("-\t", file,"\n"))
}
```

- ../../Data/ACCIDENT.csv
- ../../Data/ACCIDENT_EVENT.csv
- ../../Data/ACCIDENT_LOCATION.csv
- ../../Data/ATMOSPHERIC_COND.csv
- ../../Data/NODE.csv
- ../../Data/Order_9WAPHM.zip
- ../../Data/PERSON.csv
- ../../Data/ROAD_SURFACE_COND.csv
- ../../Data/SUB_DCA.csv
- ../../Data/VEHICLE.csv
- ../../Data/VICTORIAN_ROAD_CRASH_DATA.geojson

The URL indicates that the metadata was updated 29 April 2024, data observations updated as at 27 November 2024 and that observations temporal start was 1 January 2012.

Data

Provide explanations here.

```
# Import the data, provide your R codes here.
```

Understand

```
# This is the R chunk for the Understand Section
```

Provide explanations here.

Tidy & Manipulate Data I

```
# This is the R chunk for the Tidy & Manipulate Data I
```

Provide explanations here.

Tidy & Manipulate Data II

```
# This is the R chunk for the Tidy & Manipulate Data II
```

Provide explanations here.

Scan I

```
# This is the R chunk for the Scan I
```

Provide explanations here.

Scan II

```
# This is the R chunk for the Scan II
```

Provide explanations here.

Transform

```
# This is the R chunk for the Transform Section
```

Provide explanations here.

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