Package: roadcrashVIC (via r-universe)

November 17, 2026

Title Explore Victorian Road Crashes

Version 0.2.0

Description Provides cleaned Victorian road crash data (casualty crashes, 2012 to 2025), local government area boundaries and resident population, with functions to filter crashes by date, summarise them by any variable and calculate rates per 100,000 residents. Includes a Shiny app for exploring how road trauma has changed across Victoria, when and where crashes happen, and which road users are most affected, state-wide or in selected local areas (LGAs).

License AGPL (>= 3)

Encoding UTF-8

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Depends R (>= 4.1.0)

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LazyDataCompression xz

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BugReports https://github.com/EduVit/roadcrashVIC/issues

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`crash_rates` *Crash and casualty rates per 100,000 residents*

Description

Adds the population and the number of crashes and casualties per 100,000 residents per year to `summarise_crashes()`. Groups that cover several years use the population summed over those years.

Usage

```
crash_rates(data, population, by = "year")
```

Arguments

`data`	A data frame of crashes, such as vic_crashes, optionally filtered with `filter_crashes()`.
`population`	A data frame of population by `year` and `lga_name`, such as vic_population.
`by`	`"year"`, `"lga_name"` or `c("year", "lga_name")`.

Value

The columns of `summarise_crashes()`, plus:

`population` Residents, summed over the years in the group.

`crashes_per_100k` Crashes per 100,000 residents per year.

`fatalities_per_100k` People killed per 100,000 residents per year.

`serious_injuries_per_100k` People seriously injured per 100,000 residents per year.

`other_injuries_per_100k` People with other injuries per 100,000 residents per year.

`ksi_per_100k` People killed or seriously injured per 100,000 residents per year.

Examples

```
# Victoria, year by year
crash_rates(vic_crashes, vic_population, by = "year")

# Average annual rate in each LGA over 2021 to 2025
vic_crashes |>
  filter_crashes(start_date = "2021-01-01", end_date = "2025-12-31") |>
  crash_rates(vic_population, by = "lga_name")
```

---

filter_crashes *Filter crashes to a date range*

Description

Keep only the crashes that happened between two dates (both included).

Usage

```
filter_crashes(
  data,
  start_date = min(data$accident_date),
  end_date = max(data$accident_date)
)
```

Arguments

`data`	A data frame of crashes with an `accident_date` column, such as vic_crashes.
`start_date, end_date`	First and last day to keep, as dates or `"YYYY-MM-DD"` strings. Default to the first and last date in `data`.

Value

The rows of `data` between `start_date` and `end_date`, with the same columns.

Examples

```
# Crashes in the 2024-25 financial year
fy <- filter_crashes(vic_crashes, start_date = "2024-07-01", end_date = "2025-06-30")
nrow(fy)

# Only a start date: everything from 2020 onwards
nrow(filter_crashes(vic_crashes, start_date = "2020-01-01"))
```

run_app *Launch the Victorian road crash app*

Description

Opens the Shiny app included in the package, in the browser or in the RStudio/Positron viewer.

Usage

```
run_app()
```

Value

No return value; called for its side effect of launching the app.

Examples

```
if (interactive()) run_app()
```

summarise_crashes *Summarise crashes and casualties by one or more variables*

Description

Counts crashes and people killed and injured in each group, and the number of casualties per 1,000 crashes. KSI is people killed or seriously injured.

Usage

```
summarise_crashes(data, by)
```

Arguments

`data`	A data frame of crashes, such as vic_crashes, optionally filtered with `filter_crashes()`.
`by`	Character vector of columns to group by, for example `"hour"` or `c("day_of_week", "hour")`.

Value

A tibble with one row per group, sorted by the grouping columns, with columns:

`crashes` Number of crashes.

`fatalities` People killed.

`serious_injuries` People seriously injured.

`other_injuries` People with other injuries.

`ksi` People killed or seriously injured.

`fatalities_per_1000_crashes` People killed per 1,000 crashes.

`serious_injuries_per_1000_crashes` People seriously injured per 1,000 crashes.

`other_injuries_per_1000_crashes` People with other injuries per 1,000 crashes.

`ksi_per_1000_crashes` People killed or seriously injured per 1,000 crashes.

Examples

```
summarise_crashes(vic_crashes, by = "hour")

vic_crashes |>
  filter_crashes(start_date = "2022-01-01", end_date = "2024-12-31") |>
  summarise_crashes(by = c("day_of_week", "hour"))
```

`summarise_vulnerable` *Summarise crashes involving vulnerable road users*

Description

Applies `summarise_crashes()` to all crashes, and to the crashes involving a pedestrian, a cyclist or a motorcyclist.

Usage

```
summarise_vulnerable(data)
```

Arguments

`data`	A data frame of crashes, such as vic_crashes, optionally filtered with `filter_crashes()`.

Value

A tibble with four rows (`All crashes`, `Pedestrian`, `Cyclist`, `Motorcyclist`): a `road_user` column, then the columns of `summarise_crashes()`.

Examples

```
summarise_vulnerable(vic_crashes)
```

`vic_crashes` *Victorian road crashes resulting in casualties, 2012 to 2025*

Description

One row per road crash in Victoria in which at least one person was injured or killed, from 1 January 2012 to 31 December 2025, as recorded by Victoria Police.

Usage

```
vic_crashes
```

Format

A tibble with 202,065 rows and 51 columns:

accident_no (character) Unique crash identifier.

accident_date (Date) Date of the crash.

year (integer) Year of the crash.

month (factor) Month of the crash, `Jan` to `Dec`.

day_of_week (factor) Day of the week, `Monday` to `Sunday`.

hour (integer) Hour of the day, 0 to 23 (17 means 5:00pm to 5:59pm).

accident_type (character) Type of crash, for example `Collision with vehicle` or `Struck Pedestrian`.

dca_code_description (character) Detailed crash type (Definitions for Classifying Accidents).

light_condition (character) Light at the time of the crash, for example `Day` or `Dark No street lights`.

police_attend (character) Whether police attended the scene (`Yes` or `No`).

road_geometry (character) Road layout, for example `T intersection` or `Not at intersection`.

severity (factor) Severity of the crash: `Fatal accident`, `Serious injury accident` or `Other injury accident`.

speed_zone (ordered factor) Speed limit, `30 km/h` to `110 km/h`, then `Off road` and `Other`.

run_offroad (character) Whether the vehicle ran off the road (`Yes` or `No`).

road_full_name (character) Road name and type, for example `Alfred Street`.

lga_name (character) Local government area (LGA), spelled as in vic_lga.

dtp_region (character) Department of Transport and Planning region.

latitude (numeric) Latitude of the crash.

longitude (numeric) Longitude of the crash.

total_persons (numeric) People involved.

inj_or_fatal (numeric) People killed or injured.

fatality (numeric) People killed.

seriousinjury (numeric) People seriously injured.

otherinjury (numeric) People with other injuries.

noninjured (numeric) People not injured.

males (numeric) Males involved.

females (numeric) Females involved.

bicyclist (numeric) Cyclists involved.

passenger (numeric) Passengers involved.

driver (numeric) Drivers involved.

pedestrian (numeric) Pedestrians involved.

pillion (numeric) Pillion passengers involved.

motorcyclist (numeric) Motorcyclists involved.

unknown (numeric) Road users of unknown type involved.

ped_cyclist_5_12 (numeric) Pedestrians and cyclists aged 5 to 12 involved.

ped_cyclist_13_18 (numeric) Pedestrians and cyclists aged 13 to 18 involved.

old_ped_65_and_over (numeric) Pedestrians aged 65 and over involved.

old_driver_75_and_over (numeric) Drivers aged 75 and over involved.

young_driver_18_25 (numeric) Drivers aged 18 to 25 involved.

no_of_vehicles (numeric) Vehicles involved, including bicycles.

heavyvehicle (numeric) Heavy vehicles involved.

passengervehicle (numeric) Passenger vehicles involved.

motorcycle (numeric) Motorcycles involved.

pt_vehicle (numeric) Public transport vehicles involved (tram, bus or train).

deg_urban_name (character) How urban the location is, for example `MELB_URBAN` or `RURAL_VICTORIA`.

rma (character) Road classification, for example `Freeway` or `Local Road`.

divided (character) Whether the road is divided (`Divided` or `Undivided`).

stat_div_name (character) Statistical division (`Metro` or `Country`).

involves_pedestrian (logical) At least one pedestrian involved.

involves_cyclist (logical) At least one cyclist involved.

involves_motorcyclist (logical) At least one motorcyclist or pillion passenger involved.

Source

Victorian Government (Department of Transport and Planning), *Victorian road crash data*, https://discover.data.vic.gov.au/dataset/victoria-road-crash-data, licensed under CC BY 4.0. Data last updated 13 October 2026; retrieved 25 October 2026.

Changes made: kept casualty crashes up to 31 December 2025; cleaned column names; added `year`, `month`, `hour`, `road_full_name` and the `involves_*` columns; converted categories to factors; set `Unk.`, `Unknown` and `Not known` to `NA`; matched LGA names to vic_lga; removed `ACCIDENT_TIME`, `VICGRID_X`, `VICGRID_Y`, `ROAD_ROUTE_1`, `ROAD_NAME`, `ROAD_TYPE`, `DCA_CODE` and `SRNS`.

vic_lga *Victorian local government area boundaries*

Description

Simplified boundaries of the local government areas (LGAs) in Victoria, for mapping.

Usage

```
vic_lga
```

Format

An `sf` object (a tibble with a geometry column) with 80 rows and 4 columns:

lga_code (character) ABS LGA code.

lga_name (character) LGA name in capitals, for example `MERRI-BEK`.

unincorporated (logical) `TRUE` for the unincorporated areas (alpine resorts and islands).

geometry (sfc_MULTIPOLYGON) Boundary, in longitude and latitude (WGS 84).

Source

Department of Transport and Planning, State of Victoria, *Vicmap Admin - Local Government Area (LGA) Polygon Aligned to Property* (resource LGA_POLYGON, metadata ID cff349f9-3ef3-51bd-b5a9-ae650f6d6c24), published 16 October 2026, licensed under CC BY 4.0. Retrieved 25 October 2026. https://discover.data.vic.gov.au/dataset/vicmap-admin-local-government-area-lga-polygon-aligne

Changes made: kept the ABS code and name; merged the unincorporated areas into one `UNINCORPORATED VIC` feature; added `unincorporated`; converted to WGS 84; simplified with a 100 m tolerance; sorted by name.

vic_population *Estimated resident population of Victorian local government areas*

Description

Estimated resident population of each Victorian local government area (LGA) at 30 June, 2012 to 2025.

Usage

```
vic_population
```

Format

A tibble with 1,120 rows and 4 columns:

lga_code (character) ABS LGA code.

lga_name (character) LGA name in capitals, spelled as in vic_lga and vic_crashes.

year (integer) Year (population at 30 June).

population (numeric) Estimated resident population.

Source

Australian Bureau of Statistics, *Regional population, 2024-25* (Cat. no. 3218.0), dataset ERP_LGA2025, https://www.abs.gov.au/statistics/people/population/regional-population/2024-25, licensed under CC BY 4.0. Retrieved 25 October 2026. **Changes made:** kept Victorian LGAs for 2012 to 2025; renamed columns; LGA names in capitals without the "(Vic.)" suffix.

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