Traffic Accidents Data Set

Karolien Geurts

Research Group Data and Modelling
Limburgs Universitair Centrum
Universitaire Campus, B-3590 Diepenbeek, BELGIUM
Email: karolien.geurts@luc.ac.be

1. General Description of the Data

This data set of traffic accidents is obtained from the National Institute of Statistics (NIS) for the region of Flanders (Belgium) for the period 1991-2000. More specifically, the data are obtained from the Belgian "Analysis Form for Traffic Accidents" that should be filled out by a police officer for each traffic accident that occurs with injured or deadly wounded casualties on a public road in Belgium. In total, 340.184 traffic accident records are included in the data set.

The traffic accident data contain a rich source of information on the different circumstances in which the accidents have occurred: course of the accident (type of collision, road users, injuries, …), traffic conditions (maximum speed, priority regulation, …), environmental conditions (weather, light conditions, time of the accident, …), road conditions (road surface, obstacles, …), human conditions (fatigue, alcohol, …) and geographical conditions (location, physical characteristics, …). Table 1 gives an overview of these attributes.

In total, 572 different attribute values are represented in the data set. On average, 45 attributes are filled out for each accident in the data set.

Table 1: List of attributes included in the data set

Variable	Item
Built up area	Inside built up area, outside built up area
Type of road	highway; district or province road
Type of road lanes	road with one road lane; road with separated road lanes
Intersection	near intersection; outside intersection
Intersection traffic regulation	intersection police officer; intersection traffic lights; intersection flashing light; intersection traffic signs; intersection priority to right
Location characteristic	road works; bridge; tunnel; railroad; roundabout
Road factors	bad road surface; faulty signals; faulty lighting; road works; queue; downhill; curve; bad visibility
Miscellaneous	accident following accident; aquaplaning; sun blinded; school; recreation centre; bus stop; person swung out of vehicle; no safety belt; no helmet; no child seat; cargo on roadway before accident; cargo on roadway because of accident; fire after accident; comments

Variable	Item
Weather conditions	normal weather; rain; fog; wind; snow; hail; other weather
Road conditions	dry road surface; wet road surface; snow on road surface; clean road surface; dirty road surface
Light conditions	daylight; twilight; public lighting; night
Week	week; weekend
Day of week	Monday; Tuesday; Wednesday; Thursday; Friday; Saturday; Sunday
Part of the day	morning rush hour7_9h; morning10-12h; afternoon13_15h; evening rush hour16_18h; evening19_21h; night22_6h
Type of road user	car; car double use; minibus; light truck; camper; truck; truck and trailer; truck; tractor; bus; trolleybus; motor coach; motorbike less 400cc; motorbike more 400cc; moped A; moped B; moped 3_4 wheels; bike; span; wheel chair; pedestrian with bike; pedestrian; horseman; other road user
Direction	positive way; negative way; transverse way; way not applicable
Movement	straight direction; opposite direction; loss control to the left; loss control to the right; left turn; right turn; pass left; pass right; u turn; drive backwards; car breakdown; standstill opening door; standstill; parking; private property; other movement
Dynamics	constant speed; brake; accelerate; standstill
Alcohol	no alcohol test; refused alcohol test; positive alcohol test; negative alcohol test
Sex road user	male road user; female road user
Consequences road user	dead road user; seriously injured road user; lightly road user; uninjured road user
Age road user	age road user 0_17; age road user 18_29; age road user 30_45; age road user 46_60; age road user over60
Condition road user	road user normal condition; drunk road user; sedated road user; ill road user
Factors road user	through red light; no priority, over white line; incorrect passing; sidestep maneuver; incorrect position on roadway; loss control steering wheel; no distance; fall
Factors vehicle	incorrect vehicle lights; bad tires; flat tire; defect trailer or cargo
Type of collision	multiple collision; frontal collision; parallel collision; sideways collision; pedestrian collision; collision obstacle on roadway; collision obstacle outside roadway; collision no obstacle
Type of obstacle	animal, train; streetcar; load on roadway; container; road works; street border; speed ramp; excavation; tree; public lighting; post; over crash barrier; against crash barrier; wall; fence; canal; other obstacle

Variable	Item
Position pedestrian	on footpath; pedestrian on cycle track; pedestrian out of vehicle; pedestrian right side roadway; pedestrian left side roadway; zebra crossing with traffic lights; zebra crossing with police officer; zebra crossing; next to zebra crossing with traffic lights; next to zebra crossing with police officer next to zebra crossing; no zebra crossing; pedestrian not moving on roadway
Visibility pedestrian	pedestrian visible; pedestrian not visible
Walking distance pedestrian	walking distance 1_4m; walking distance 5_10m; walking distance 11_15=; walking distance over16
Position cyclist	separated cycle track; marked cycle track on roadway; other cycle track
Cycle track	one way cycle track; two way cycle track normal direction; one way cycle track opposite direction
Cargo signalisation	blank orange product sign; numbered product sign
State of cargo	empty load; load leakage; no load leakage
Sex passenger	male passenger; female passenger
Consequences passenger	dead passenger; seriously injured passenger; lightly injured passenger
Position passenger	passenger front seat; passenger back seat
Age passenger	age passenger 0_17; age passenger 18_29; age passenger 30_45; age passenger 46_60; age passenger over60
Sex victim	male victim; female victim
Age victim	age victim 0_17; age victim 18_29; age victim 30_45; age victim 46_60; age victim over60
Consequences victim	dead victim; seriously injured victim; lightly injured victim
Number of road users	0 road users; 1 road users; 2 road users; 3 road users; 4 road users; 5 road users; 6 road users; 7 road users; 8 road users
Number of passengers	0 passengers; 1 passengers; 2 passengers; 3 passengers; 4 passengers; 5 passengers
Number of victims	0 passengers; 1 passengers; 2 passengers; 3 passengers; 4 passengers; 5 passengers
Number of lightly injured	total0 lightly injured; total1 lightly injured; total2 lightly injured; total3 lightly injured; total4 lightly injured; total5 lightly injured; total6 lightly wounded; total7 lightly wounded
Number of seriously injured	total0 seriously injured; total1 seriously injured; total2 seriously injured; total3 seriously injured; total4 seriously injured; total5 seriously injured
Number of deaths	total0 deaths; total1 deaths; total2 deaths; total3 deaths; total4 deaths; total5 deaths
Number of involved persons	total0 involved; total1 involved; total2 involved; total3 involved; total4 involved; total5 involved
Number of deaths after light injuries	0 dead_lightly injured; 1 dead_lightly injured; 2 dead_lightly injured; 3 dead_lightly injured; 4 dead_lightly injured; 5 dead_lightly injured

Variable	Item
Number of deaths after serious injuries	0 dead_seriously injured; 1 dead_seriously injured; 2 dead_seriously injured; 3 dead_seriously injured; 4 dead_seriously injured; 5 dead_seriously injured

2. Legal Issues

The data are provided 'as is'. Basically, any use of the data is allowed as long as the proper acknowledgement is provided and a copy of the work is provided to Karolien Geurts (see details below). For papers with a bibliographic section, reference should be made to the following paper (which is available for download at www.luc.ac.be/dam/publications_2003.htm) where parts of this data set were used and described:

Geurts, K. , Wets, G., T. Brijs and K. Vanhoof (2003). Profiling High Frequency Accident Locations Using Association Rules. Electronic Proceedings of the 82th Annual Meeting of the Transportation Research Board, Washington, January 12-16, USA, 18pp.

The bibtex entry is:

@conference geurts03using,
author = 'Karolien Geurts and Geert Wets and Tom Brijs and Koen Vanhoof',
title = 'Profiling High Frequency Accident Locations Using Association Rules'
booktitle = 'Proceedings of the 82nd Annual Transportation Research Board, Washington DC. (USA), January 12-16
pages= '18pp'
year = '2003'

The first submission and final text of any written work utilizing the Traffic accidents data set must be sent to the Research Group Data Analysis and Modelling along with the date and title of the publication where such work will appear. Email copies are preferred and should be sent to karolien.geurts@luc.ac.be. The address for mail correspondence is:

Karolien Geurts
Limburgs Universitair Centrum
Instituut voor Mobiliteit
Universitaire Campus – Gebouw D
B-3590 Diepenbeek

Note that this mail or email is for tracking purposes. No approval is required as long as the above conditions are met.