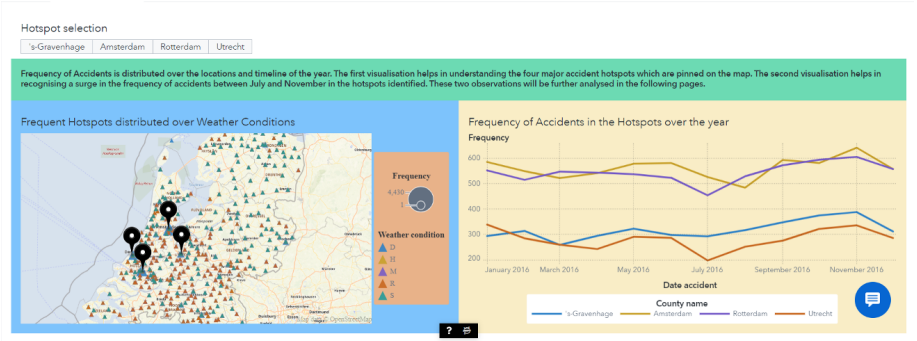
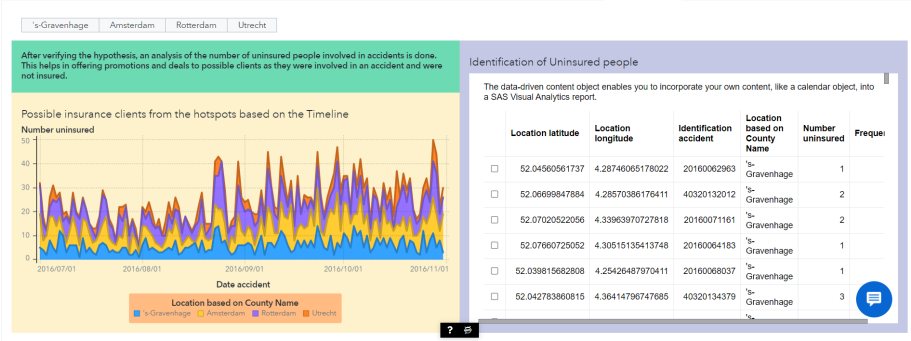
Executive Summary

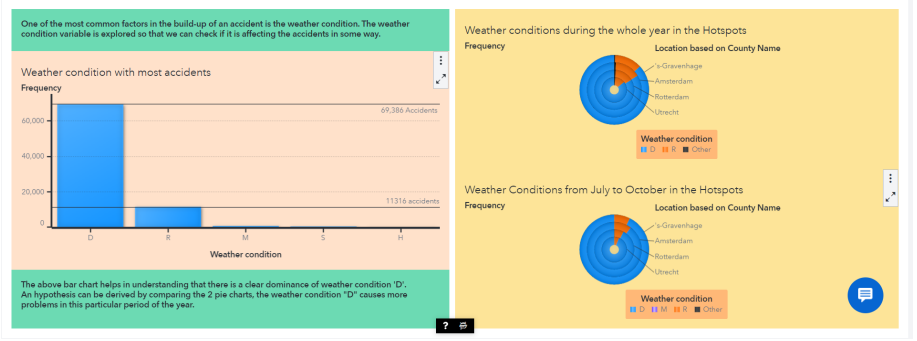
This analysis revolves around four major accident hotspots and a surge in accidents between July and November in these areas is observed. Weather condition 'D' dominated during this period, supporting our hypothesis of its significant impact.

To validate this hypothesis, a cluster analysis is used to confirm the association of weather 'D' with a higher accident frequency. An exploration on the prevalence of uninsured individuals involved in accidents is done after filtering the data, suggesting potential opportunities for targeted promotions. Clickable direct links to important pages are accessible on the Introduction page.

In summary, our findings highlight the correlation between weather condition 'D' and increased accidents in the accident hotspots. Identifying uninsured individuals presents strategic marketing

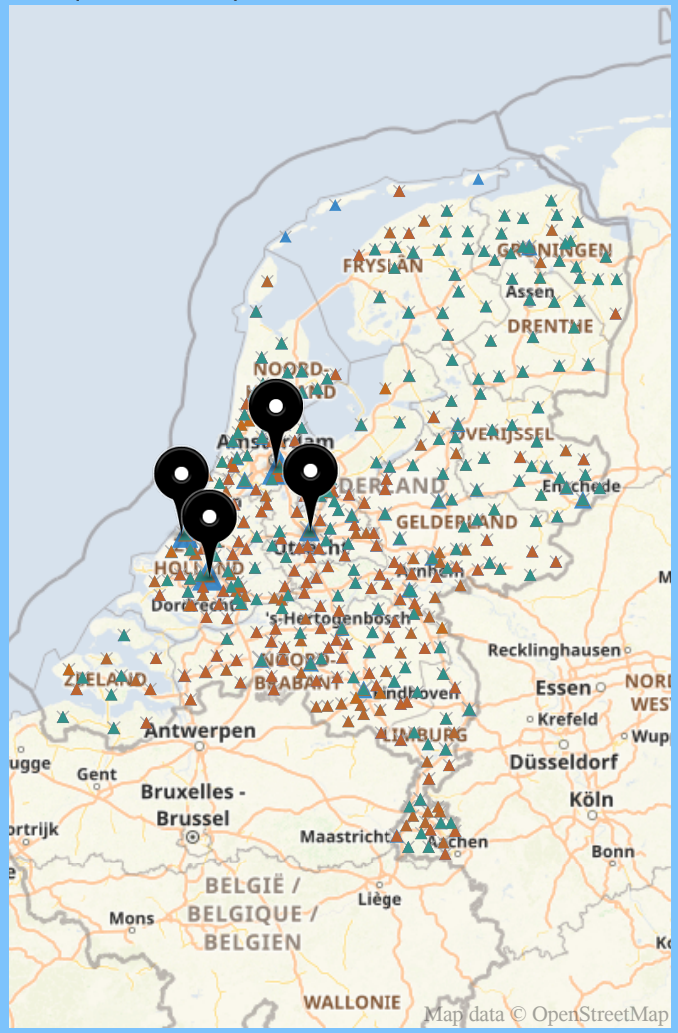






Frequency of Accidents is distributed over the locations and timeline of the year. The first visualisation helps in understanding the four major accident hotspots which are pinned on the map. The second visualisation helps in recognising a surge in the frequency of accidents between July and November in the hotspots identified. These two observations will be further analysed in the following pages.

Frequent Hotspots distributed over Weather Conditions



Frequency

4,430

1

Weather condition

(missing)

D

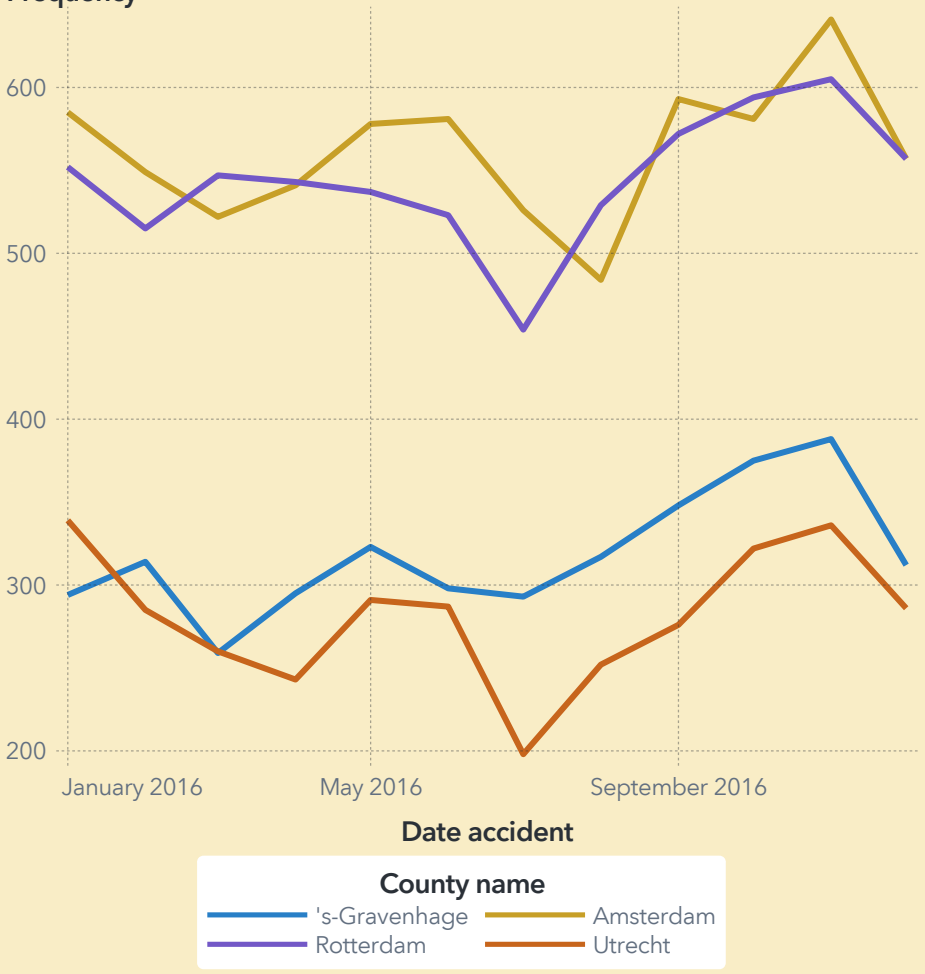
H

M

R

S

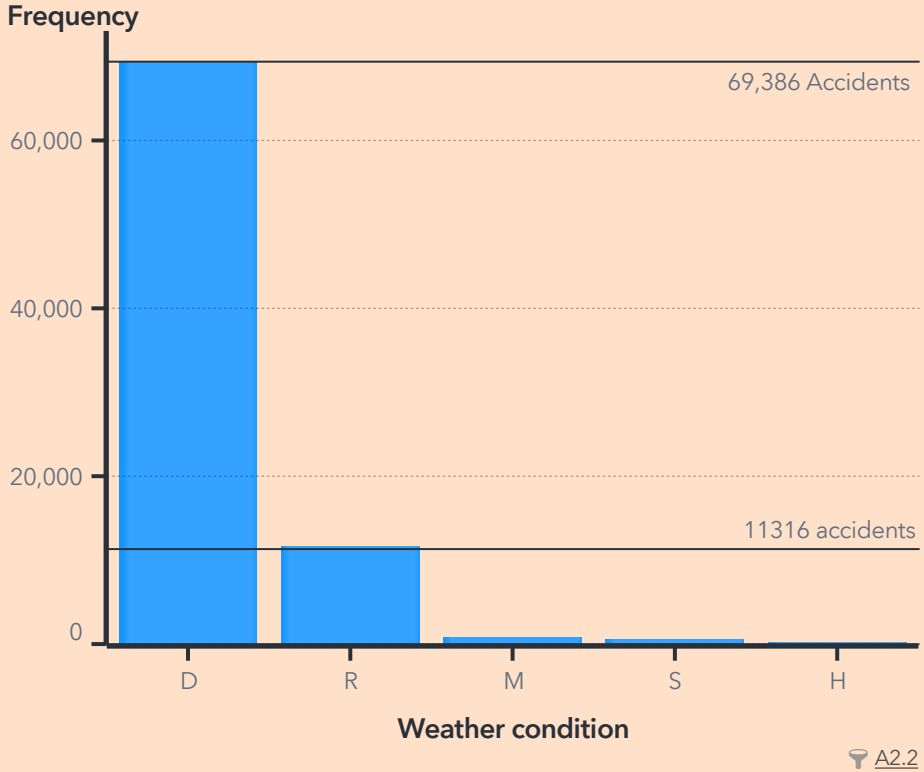
Frequency of Accidents in the Hotspots over the year



A1.1

One of the most common factors in the build-up of an accident is the weather condition. The weather condition variable is explored so that we can check if it is affecting the accidents in some way.

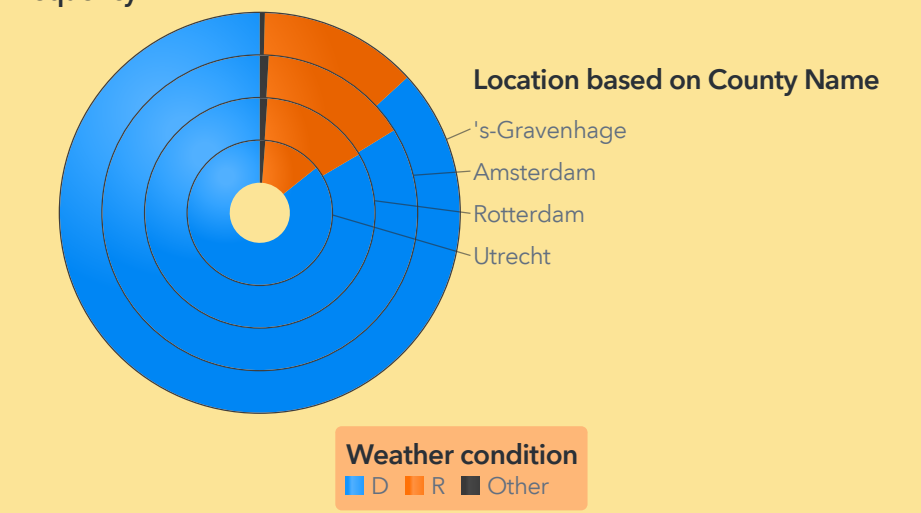
Weather condition with most accidents



A2.2

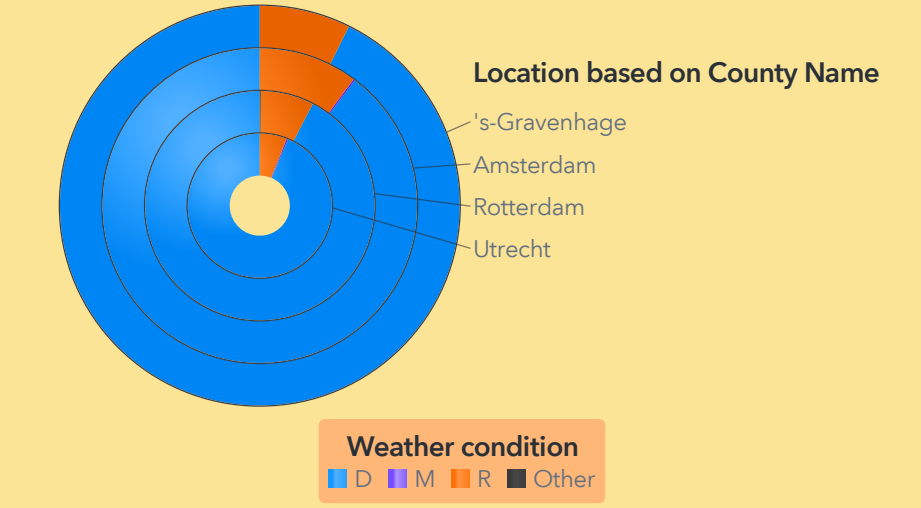
The above bar chart helps in understanding that there is a clear dominance of weather condition 'D'. An hypothesis can be derived by comparing the 2 pie charts, the weather condition "D" causes more problems in this particular period of the year.

Weather conditions during the whole year in the Hotspots



A2.1

Weather Conditions from July to October in the Hotspots



A2.3

Focussing on Weather Conditions

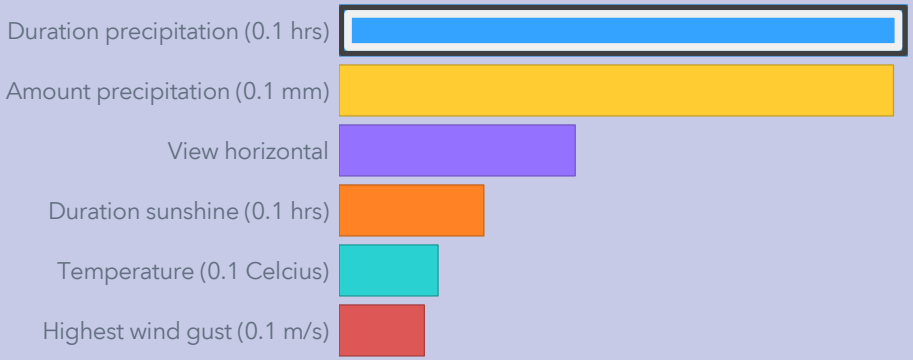
What are the characteristics of Weather condition?

D

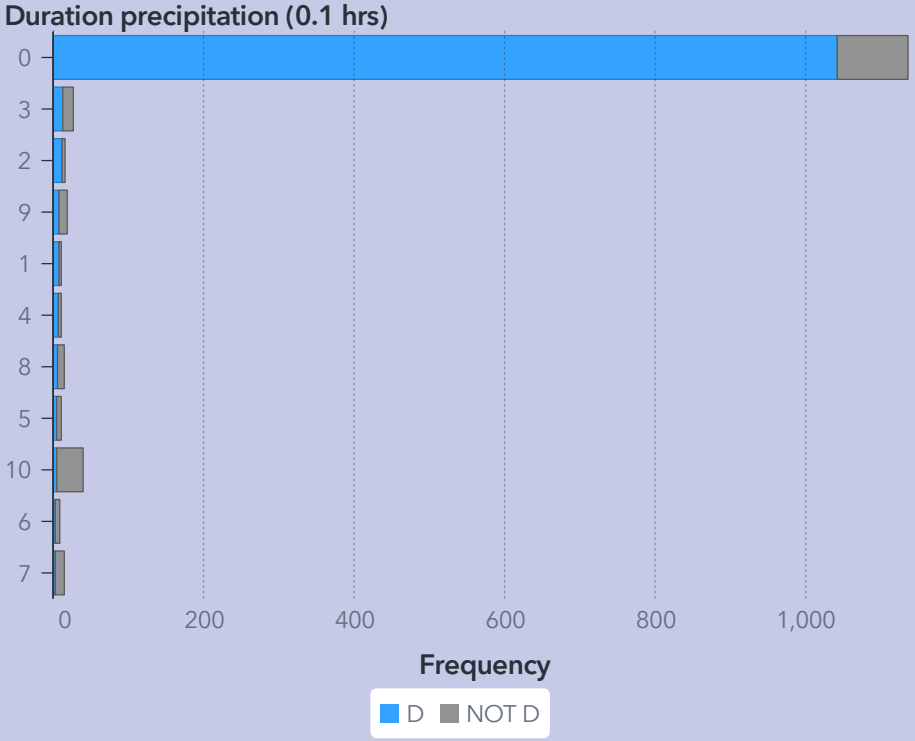
A3.1

Weather condition has a 84.89% chance (1.1K of 1.3K) of being D. It's the most common Weather condition value.

What factors are most related to Weather condition?



What is the relationship between Weather condition and Duration precipitation (0.1 hrs)?



What are the groups based on Duration precipitation (0.1 hrs) by the chance of Weather condition being D?

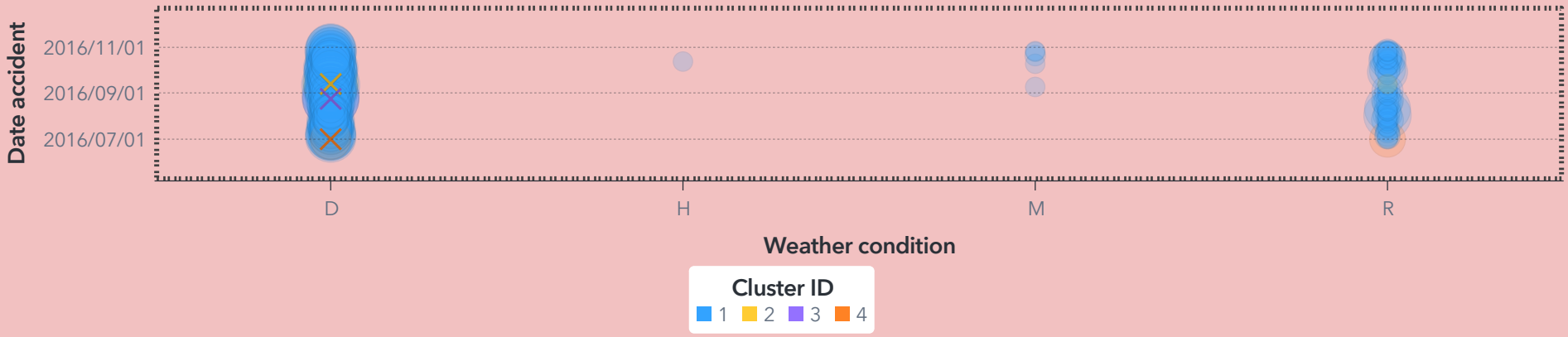
91.32%	If Duration precipitation (0.1 hrs) is 0, 1, or 2, then Weather condition has a 91.32% chance (1.1K out of 1.2K cases) of being D.
83.33%	If Duration precipitation (0.1 hrs) is 3, 4, 5, 6, 8, or 9, Temperature (0.1 Celcius) is between 131 and 162, then Weather condition has a 83.33% chance (15 out of 18 cases) of being D.
73.33%	If Duration precipitation (0.1 hrs) is 3, 4, 5, 6, 8, or 9, Identification accident is

When Duration precipitation (0.1 hrs) is 0, the total count of D is a high value; when Duration precipitation (0.1 hrs) is 3, 2, 9, 1, 4, 8, 10, 5, 7 or 6, the total count of D is a low value. The most common Duration precipitation (0.1 hrs) value is 0.

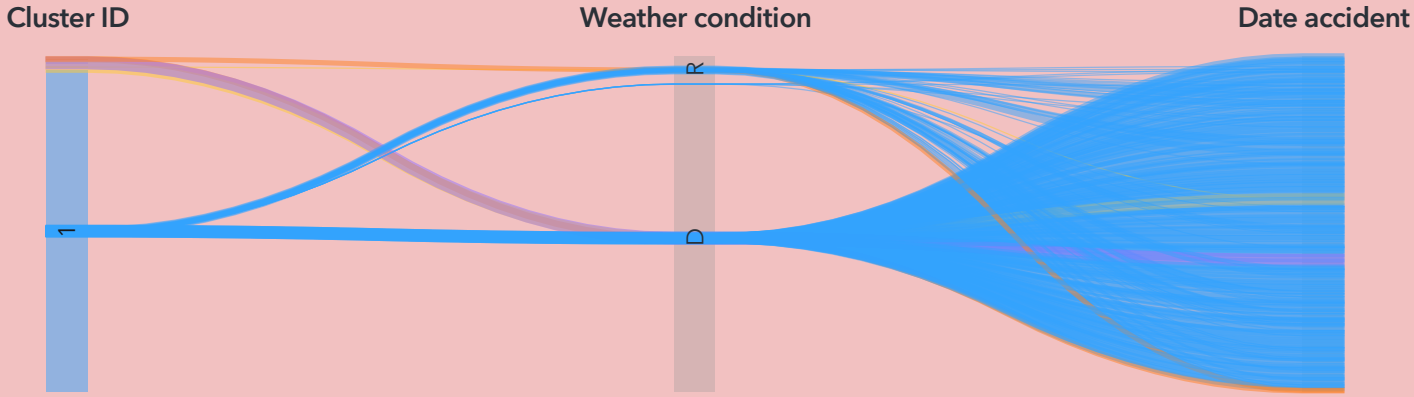
Pattern Recognition on Weather Conditions and the date of Accident

Cluster Observations Used **5,013** Unused **1,701** Polylines **183**

A4.1



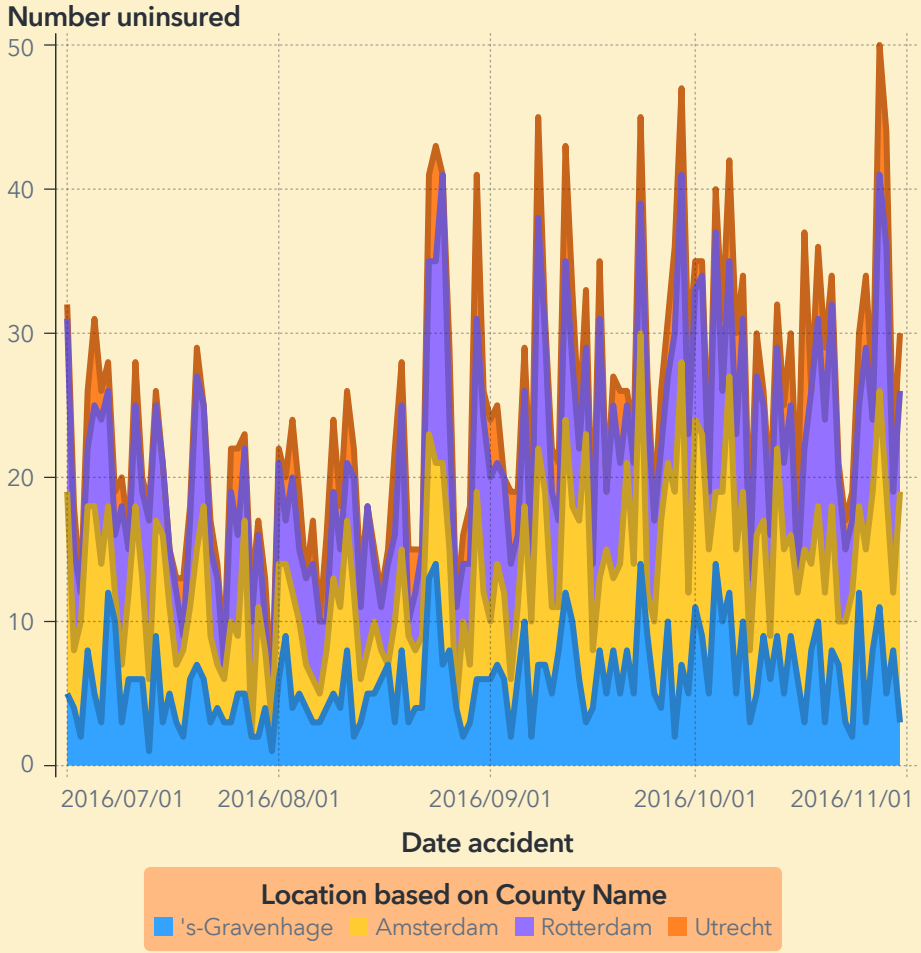
A4.2



To confirm the prelevance of weather condition 'D' in this timeline, an cluster analysis for pattern recognition is done. After focussing on the hotspots and the timeline, the location of centroids confirms our hypothesis that weather condition 'D' is causing more and more accidents in this period of the year. Please expand the visualisation to view further details on the model.

**After verifying the hypothesis, an analysis of the number of uninsured people involved in accidents is done.
This helps in offering promotions and deals to possible clients as they were involved in an accident and were not insured.**

Possible insurance clients from the hotspots based on the Timeline



A5.2

Identification of Uninsured people

A5.1

Appendix

A1.1 Frequency of Accidents in the Hotspots over the year

Filters: Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }

A2.1 Weather conditions during the whole year in the Hotspots

Filters: Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
Weather condition NOT MISSING

A2.2 Weather condition with most accidents

Filters: Weather condition NOT MISSING

A2.3 Weather Conditions from July to October in the Hotspots

Filters: Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
(2016/07/01 ≤ Date accident ≤ 2016/10/31) AND Date accident NOT MISSING
Weather condition NOT MISSING

A3.1 Drop-down list

Filters: Weather condition NOT MISSING

A4.1 Info Bar Text

Filters: Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
(2016/07/01 ≤ Date accident ≤ 2016/10/31) OR Date accident MISSING

A4.2 Cluster Diagram

Filters: Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
(2016/07/01 ≤ Date accident ≤ 2016/10/31) OR Date accident MISSING

A5.1 Identification of Uninsured people

Warnings: Web content cannot be displayed.

A5.1 Identification of Uninsured people

Filters:

Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
(1 ≤ Number uninsured ≤ 19) AND Number uninsured NOT MISSING
(2016/07/01 ≤ Date accident ≤ 2016/10/31) AND Date accident NOT MISSING

A5.2 Possible insurance clients from the hotspots based on the Timeline

Filters:

(1 ≤ Number uninsured ≤ 19) OR Number uninsured MISSING
Location based on County Name IN { ''s-Gravenhage'; 'Amsterdam'; 'Rotterdam'; 'Utrecht' }
(2016/07/01 ≤ Date accident ≤ 2016/10/31) OR Date accident MISSING

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73.33% If Duration precipitation (0.1 hrs) is 3, 4, 5, 6, 8, or 9, Identification accident is greater than or equal to 20B, then Weather condition has a 73.33% chance (11 out of 15 cases) of being D.

3.57%	If Duration precipitation (0.1 hrs) is 3, 4, 5, 6, 7, 8, 9, or 10, View horizontal is less than 42, then Weather condition has a 3.57% chance (1 out of 28 cases) of being D.
14.55%	If Duration precipitation (0.1 hrs) is 7 or 10, then Weather condition has a 14.55% chance (8 out of 55 cases) of being D.
23.26%	If View horizontal is greater than or equal to 42, Duration precipitation (0.1 hrs) is 6, 7, or 10, then Weather condition has a 23.26% chance (10 out of 43 cases) of being D.

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