

Why so late VR

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Goal

Trains are sometimes late* due to unexpected weather conditions. Our aim is to help predict when commuter trains are likely to be late.

**VR's limit of a commuter train being late is 3min*

Variables used for model

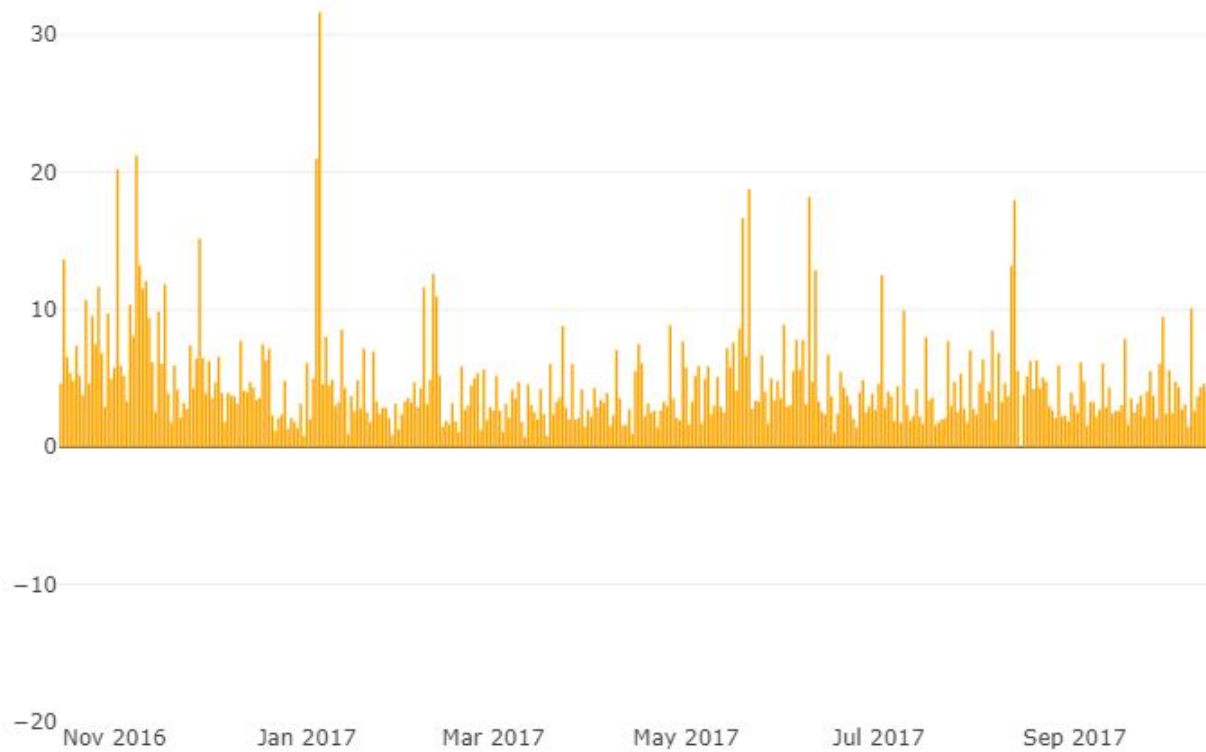
Train data by VR

- Commuter line ID
- Delays over 3min
- Departure time

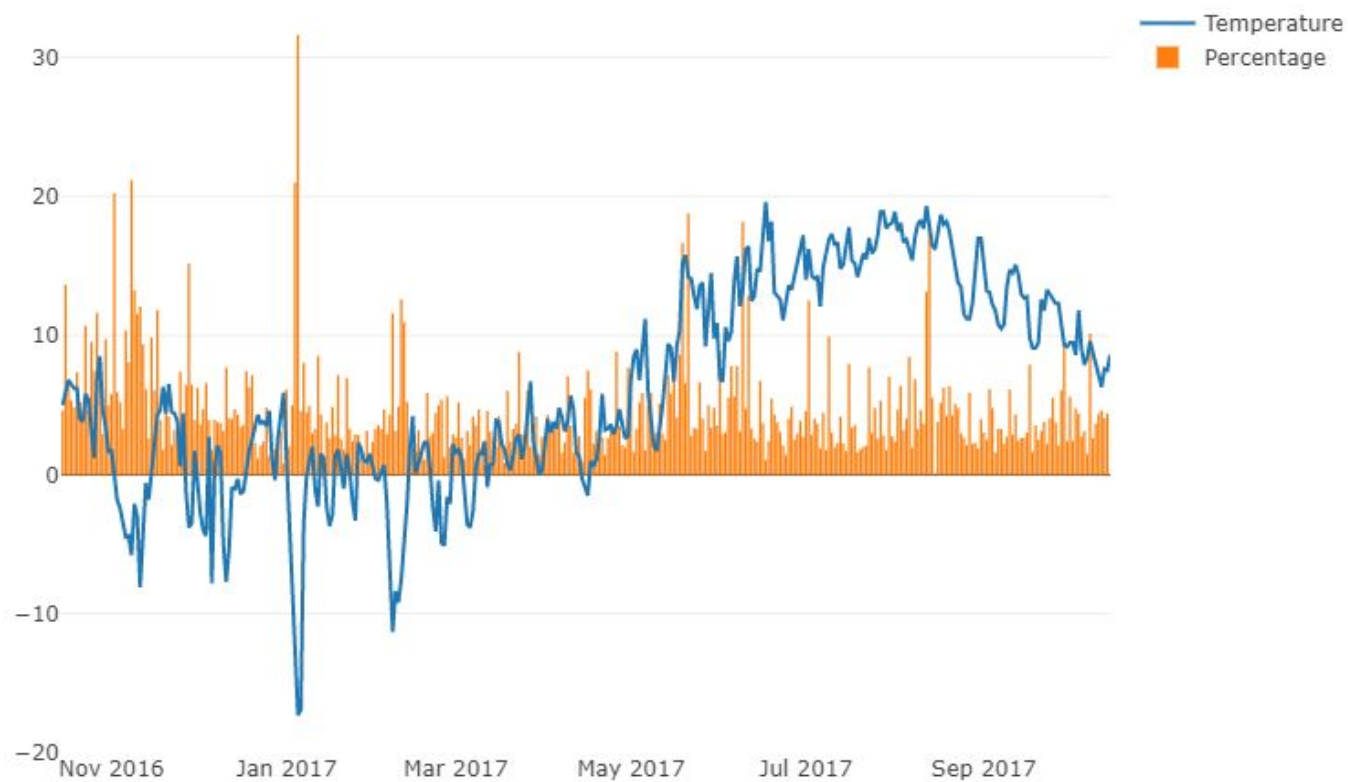
Weather data by FMI

- Temperature
- Rain
- Snow

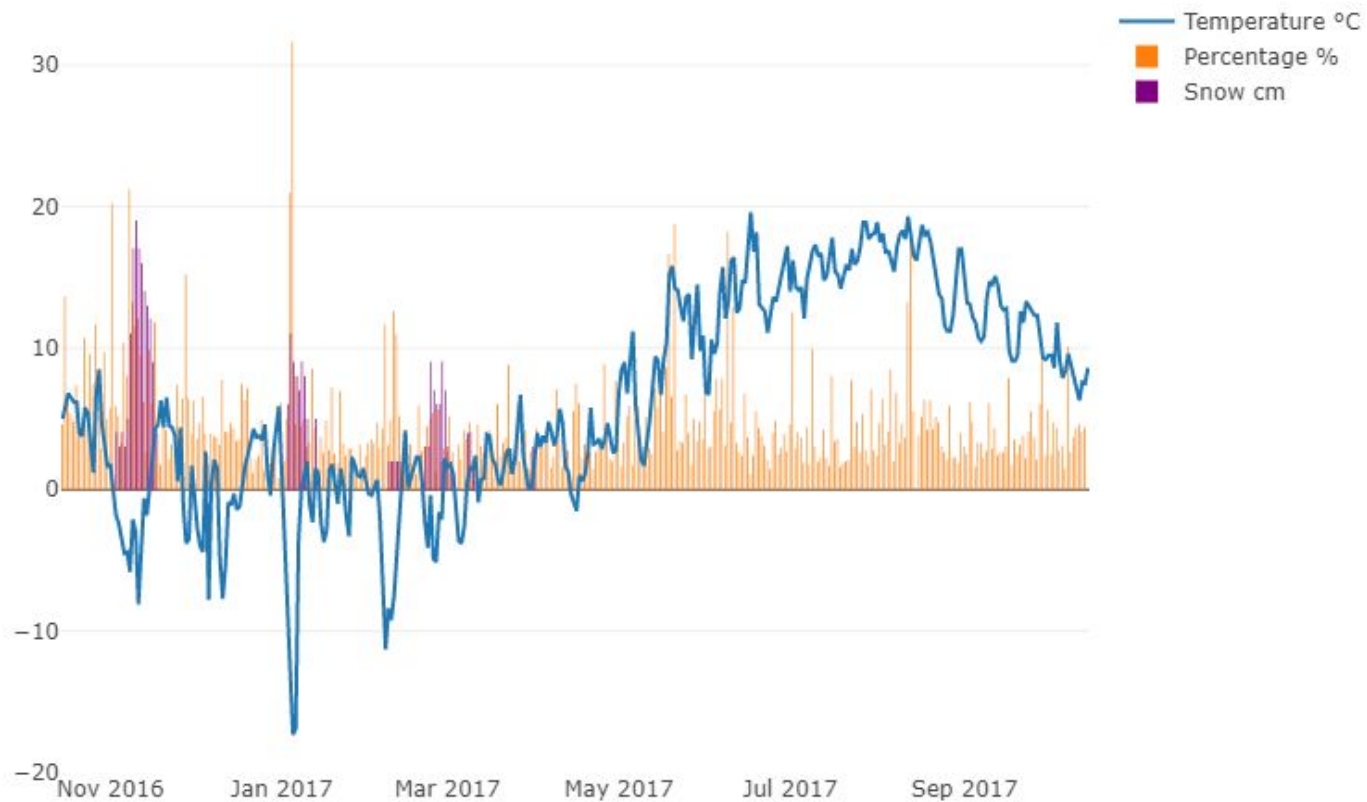
Percentages of all trains being late



Percentages of all trains being late and temperature



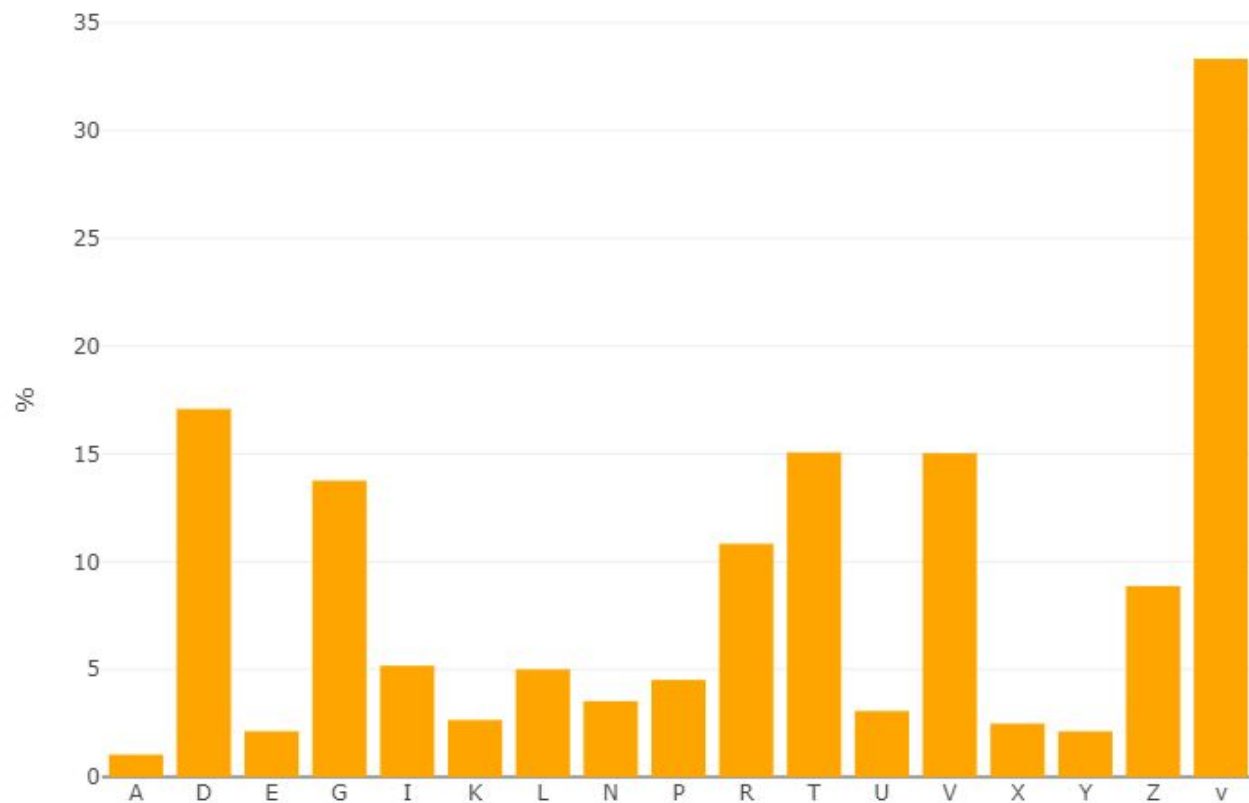
Percentages of all trains being late



Average delays of commuter trains



Percentages of delayed departures by commuter line id



Results

Yes/No prediction of which commuter train lines have more than 5% of delays on
26.10.2017

Our prediction
for 26.10.2017

Train Type	> 5%(Y/N)
A	No
D	Yes
E	No
G	Yes
I	No
K	No
L	No
N	No
P	No
R	Yes
T	Yes
U	No
X	No
Y	No
Z	Yes

Real data
(checked 15:30)

Bolded percentages
are correct
predictions

Train Type	Delays over 3 min %
A	0,1
D	50
E	11
G	54
I	2,4
K	2,5
L	19
N	4
P	0,9
R	39
T	48
U	8
X	0
Y	25
Z	33