




# COVID-19: Driving behavior insights for the transportation industry

October 2020

A person is seen from behind, sitting at a table in a room. On the wall behind them, the word "mobility" is spelled out in large, three-dimensional letters made of small, dark objects. The room has track lighting on the ceiling and a tablet on a stand in the foreground. The entire scene is overlaid with a blue tint.

At Arity, we're turning mobility data into meaningful insights to  
make transportation smarter, safer, and more useful for everyone.

# Mileage trends



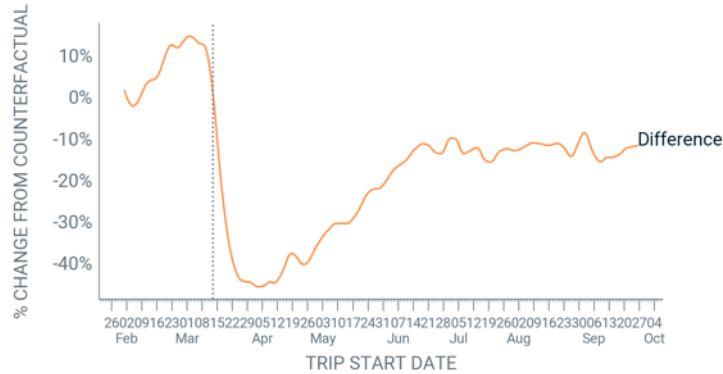
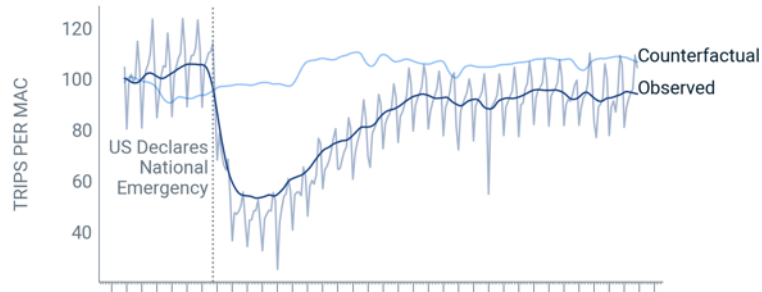
Arity's multi-source anonymized and aggregated dataset comes from multiple insurance and non-insurance sources, and is not solely reflective of any Arity affiliate companies or any other particular industry or source.

The data is collected via both mobile app and on-board device methods.

Driving is still down seven months after the pandemic hit  
 Although number of trips per connection is within 10-15% of 'normal'

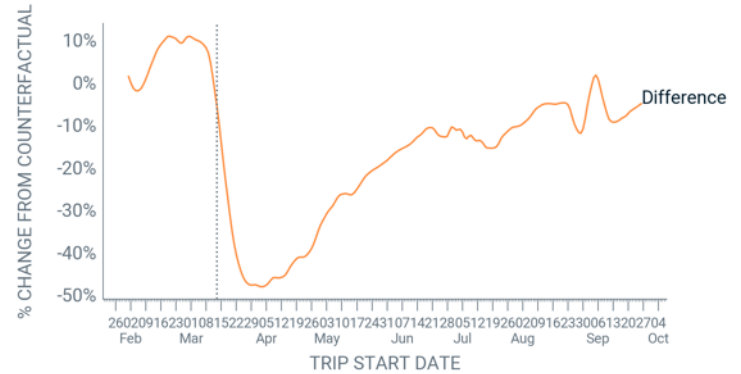
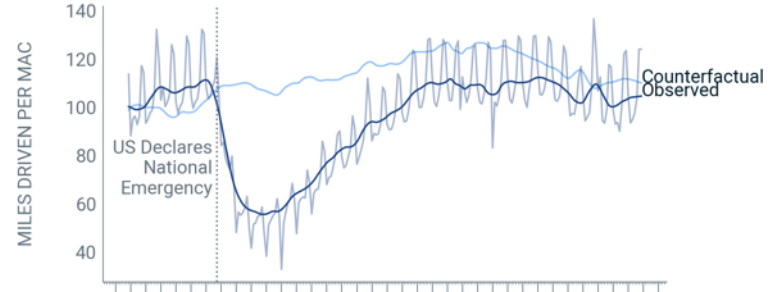
### Trips per monthly active connection

Smoothed, Indexed (100 = Feb 02)



### Miles driven per monthly active connection

Smoothed, Indexed (100 = Feb 02)



Source: Arity's anonymized and aggregated multi-source driving behavior dataset

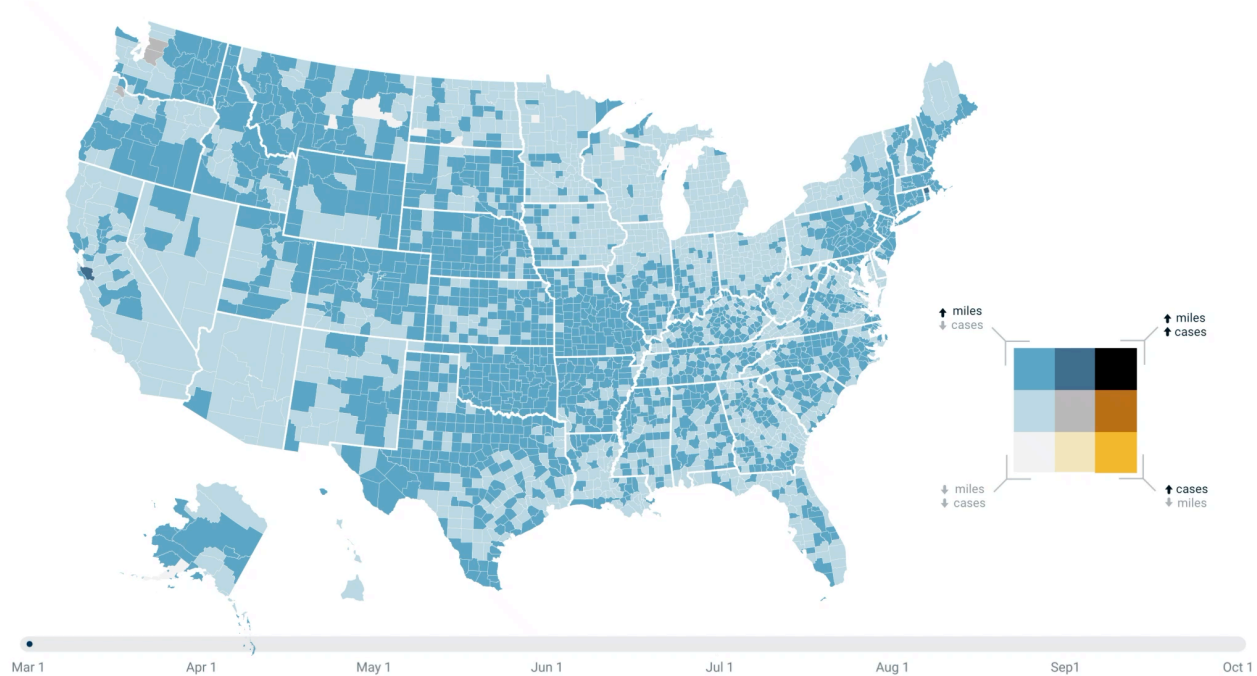
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# How has driving evolved compared with COVID-19 cases throughout the pandemic?

A look at the U.S. by county from March through September

## Driving miles and COVID-19 cases by county

On Mar 1, 2020



Source: Arity's anonymized and aggregated multi-source driving behavior dataset  
Covid case rates from: <https://usafacts.org/>

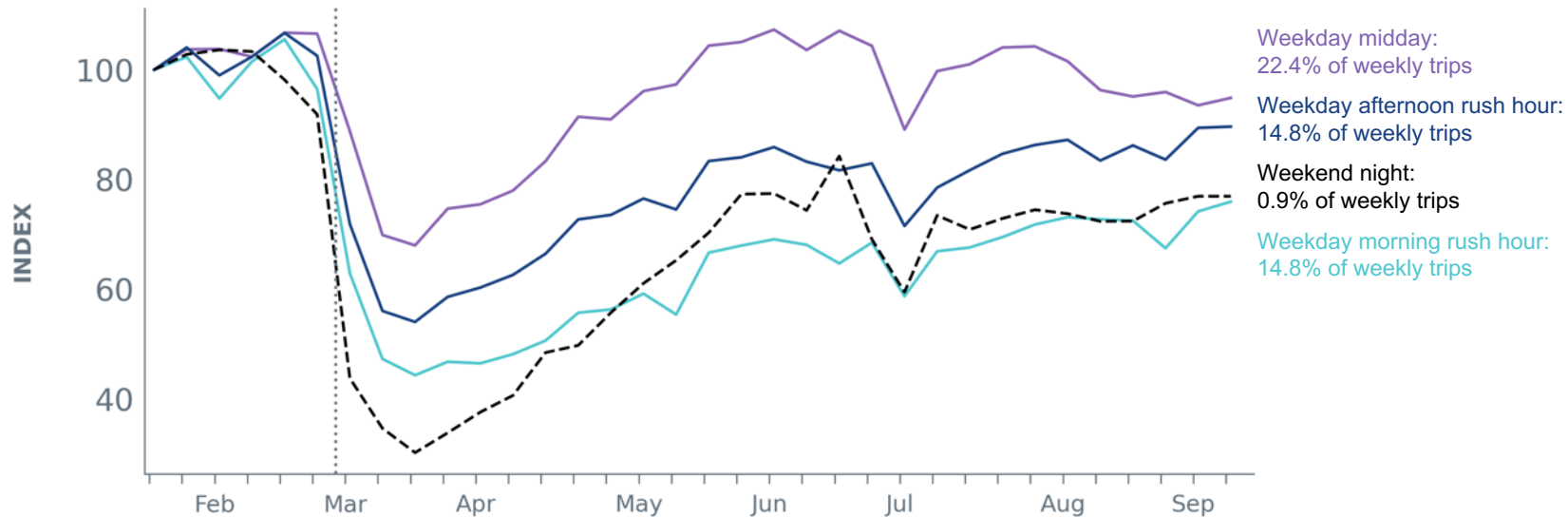
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# Driving behavior trends

Our daily commutes look very different in 2020... and weekend nights were very quiet  
Shifts in when people drive remain, even as school is back in session

## Change in trip activity by time of day

Number of trips per active user, indexed (100 = Feb 02)



Source: Arity's anonymized and aggregated multi-source driving behavior dataset

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PREDICTIVE RISK FACTORS



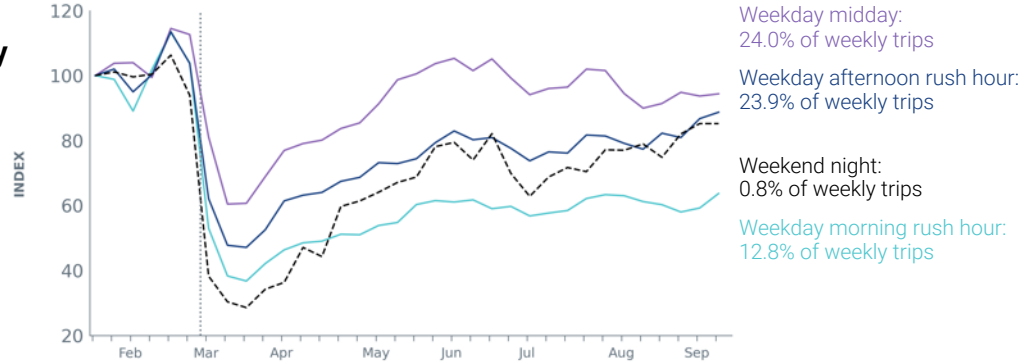
# The return to normal continues with the return to school

States where students are returning to school are seeing trip volume returning closer to pre-COVID levels

## California

### Change in trip activity by time of day

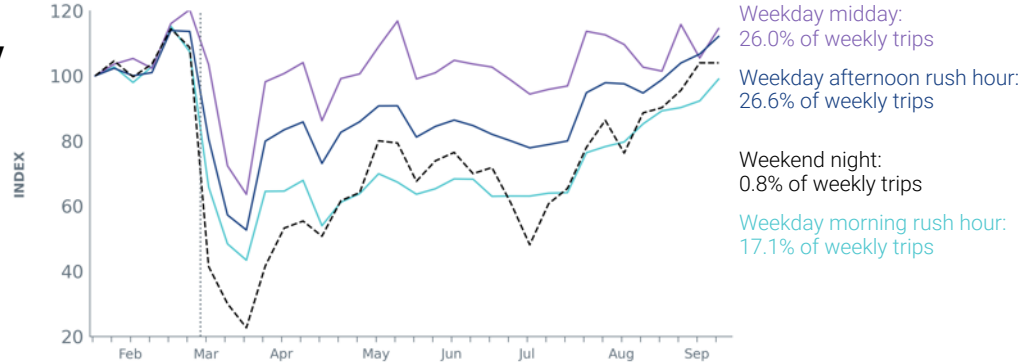
Number of trips per active user, indexed (100 = Feb 02)



## Florida

### change in trip activity by time of day

Number of trips per active user, indexed (100 = Feb 02)



Source: Arity's anonymized and aggregated multi-source driving behavior dataset

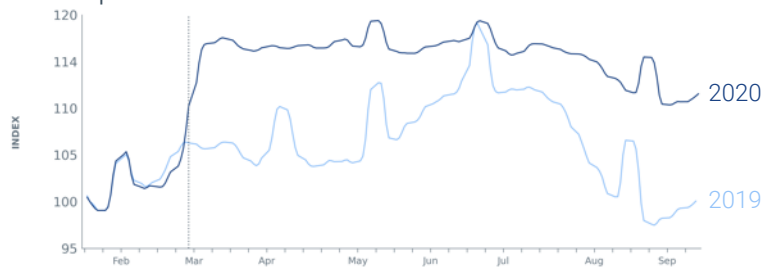
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# Even as drivers hit the road again, people are still speeding during rush hour

Average speed during rush hour is up in 2020 vs. 2019

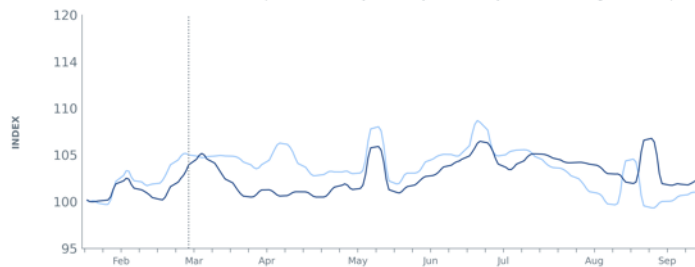
## Weekday Morning Rush Hour

5:00 am - 9:59 am, smoothed,  
indexed (100 = Feb 03)



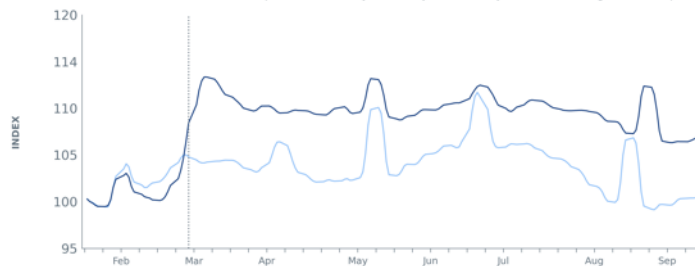
## Weekday Midday

10:00 am - 2:59 pm, smoothed,  
indexed (100 = Feb 03)



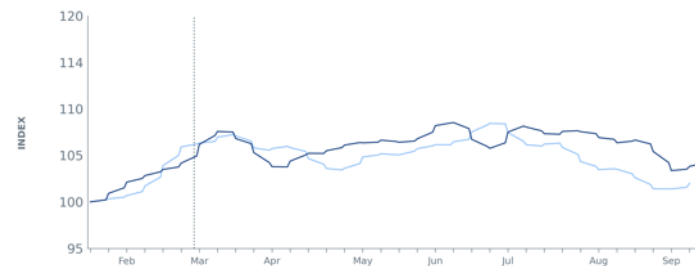
## Weekday Afternoon Rush Hour

3:00 pm - 6:59 pm, smoothed,  
indexed (100 = Feb 03)



## Weekend Night

11:00 pm - 3:59 am, smoothed,  
indexed (100 = Feb 02)



Source: Arity's anonymized and aggregated multi-source driving behavior dataset

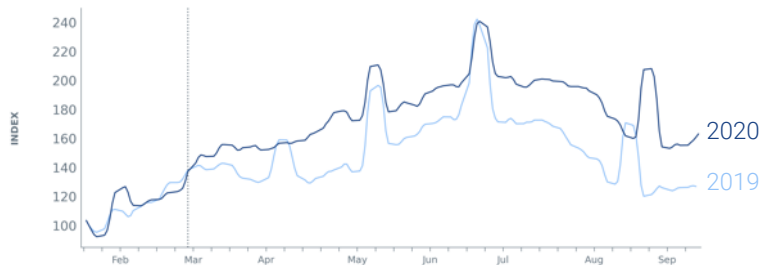
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# Think more cars are zooming past you at 80+ MPH? You're right

## High speed driving has risen in 2020 vs. 2019

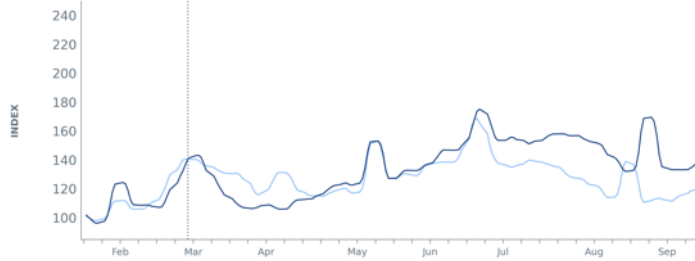
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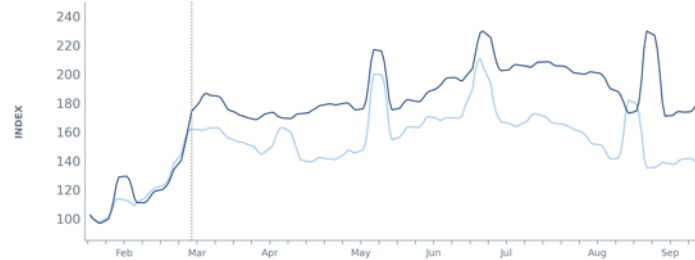
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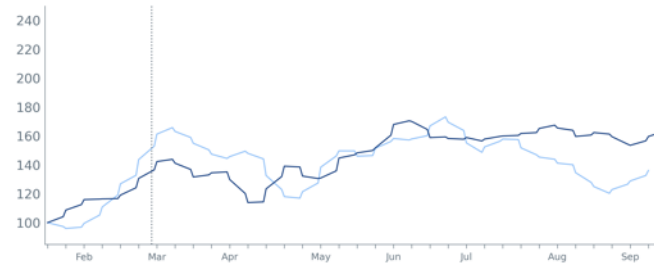
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11:00 pm - 3:59 am, smoothed,  
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Source: Arity's anonymized and aggregated multi-source driving behavior dataset

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# Despite higher travelling speeds, drivers are accelerating less aggressively

Aggressive acceleration is down regardless of time of day in 2020 vs. 2019

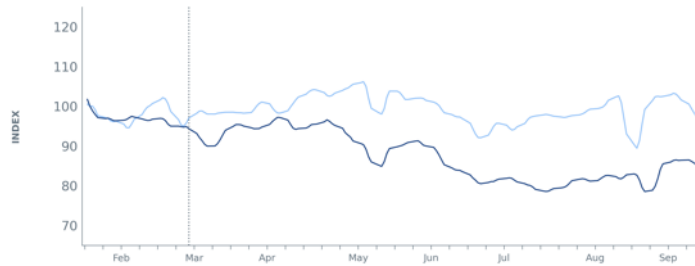
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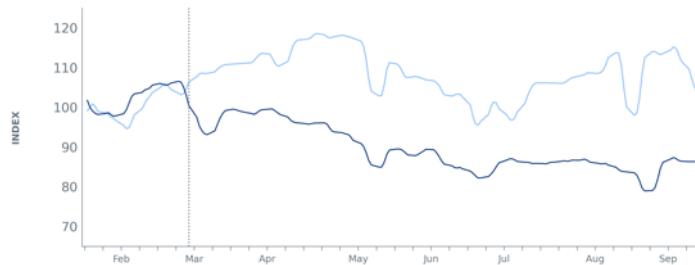
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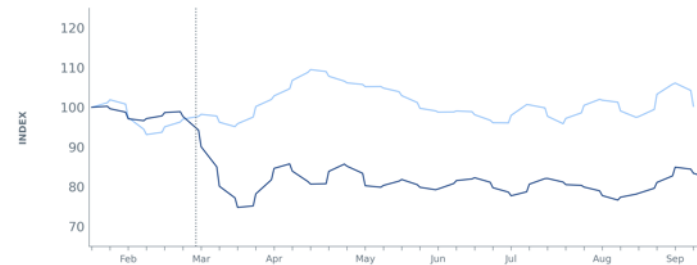
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11:00 pm - 3:59 am, smoothed,  
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# Drivers are also easing up on the brakes

Aggressive braking is down regardless of time of day in 2020 vs. 2019

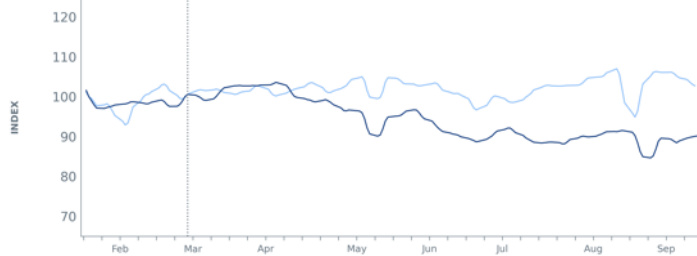
## Weekday Morning Rush Hour

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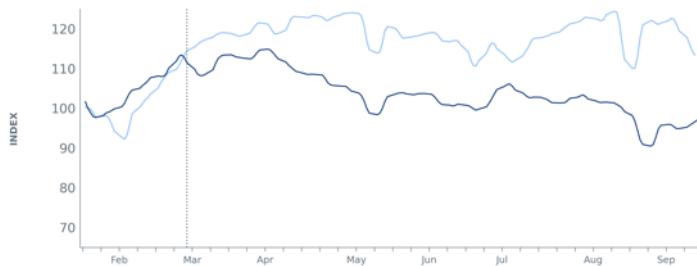
## Weekday Midday

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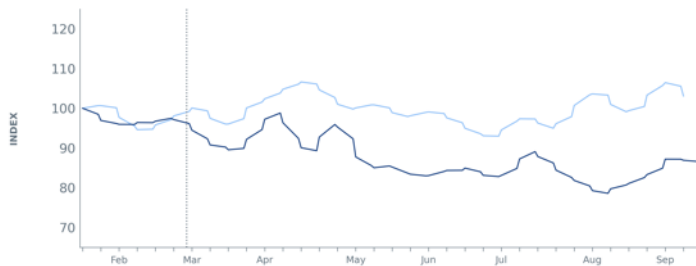
## Weekday Afternoon Rush Hour

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## Weekend Night

11:00 pm - 3:59 am, smoothed,  
indexed (100 = Feb 02)



Source: Arity's anonymized and aggregated multi-source driving behavior dataset

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Thank you.

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