

# Analysis of US Traffic Fatalities

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April 13, 2018

## Introduction

## Exploratory Analysis and Visualization

### Geographic Patterns

### Time Trends

#### Daily Cycle

At the national and state level, the cycle of fatal accidents throughout the day is fairly consistent. There is a local maximum in the early morning, correlating with morning rush hour. Beginning just before noon, the level of fatal accidents rises consistently to peak at between 7 and 8PM, before declining steadily through to about 3 or 4 in the morning.

(Insert National graphic)

With State-by-State plots, the daily fatal accident cycle is roughly similar, without significant change. The below plots show results from shape-based time series clustering of different states, according to daily fatal accident patterns.

(Insert side-by-side state-level centroid plots)

#### Weekly Cycle

## Key Predictors of Traffic Fatalities

## Conclusion

## References

- Batterman, Stuart, Richard Cook, and Thomas Justin. "Temporal variation of traffic on highways and the development of accurate temporal allocation factors for air pollution analyses." *Atmos Environ.* Apr. 2015.
- Zador, P.L, S.A. Krawchuk, and R.B. Voas. "Relative Risk of Fatal Crash Involvement by BAC, Age, and Gender." *U.S. Department of Transportation - National Highway Traffic Safety Administration.* Apr. 2000.