# Network Screening of Florida Roadways to Identify High-Risk Corridors

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## RESEARCH BACKGROUND

- In 2021, over 400,000 crashes occurred on Florida roadways, resulting in 3,741 fatalities and 16,826 serious injuries.
- Transportation agencies are prioritizing the reduction of fatal and serious injury (FSI) crashes.
- Network screening is a traffic safety tool to identify and prioritize locations for safety improvement by considering crash history, roadway factors, and traffic characteristics.
- The current standard for network screening is using methods from the Highway Safety Manual (HSM).
- HSM methods assume intersections and roadway segments are independent when they are not.
- HSM methods can also be data- and labor-intensive, making it hard to use for agencies.

## PROBLEM STATEMENT

- This research develops a roadway corridor approach to network screening that uses less data than existing methods (such as the HSM) while still providing accurate results.
- This approach can quickly identify areas in need of safety improvements and make it easier for agencies to perform network screening.

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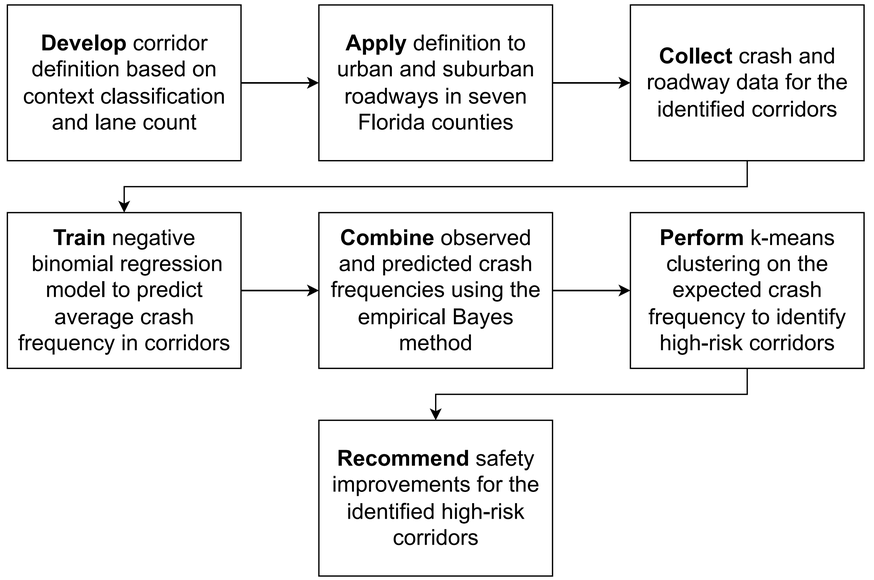
## METHODOLOGY



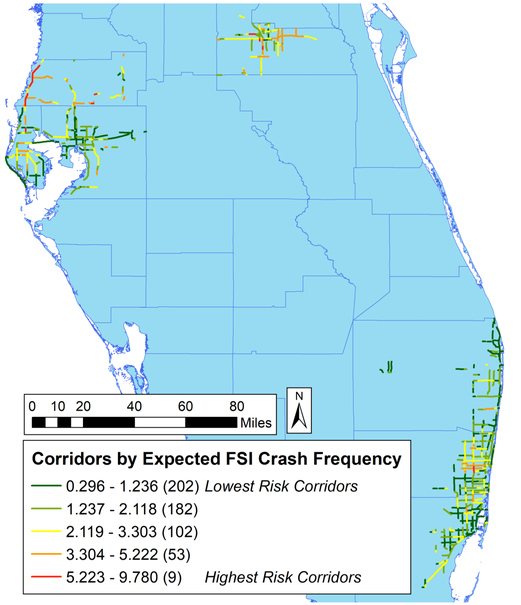

- Identified corridors needed to contain at least one signalized intersection, be at least 0.5 miles long, and have at least four years of traffic volume data.

## MODEL RESULTS & INTERPRETATION

- Corridors with high traffic volume, high signalized intersection density, and no lighting are predicted to have significantly greater FSI crash frequency.
- Compared to suburban corridors, urban corridors are predicted to have significantly lower FSI crash frequency.

## HIGH-RISK CORRIDORS

- 548 corridors covering over 1,000 lane miles were identified in the seven counties.
- The 9 highest-risk corridors contained about 10% of all FSI crashes despite being about 2% of all corridors.
- High-risk corridors tended to have more crashes due to speeding and careless driving.




## CONCLUSIONS

- Safety improvements focused on speed reduction in suburban corridors would help reduce the most FSI crashes.
- This corridor methodology can help agencies quickly identify corridors in need of safety improvements to efficiently reduce FSI crashes.