

<b>UTC Project Information</b>	
Project Title	Exploring Crowdsourced Monitoring Data for Safety
University	Texas A&M Transportation Institute
Principal Investigator	Shawn Turner
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Funding Source(s) and Amounts Provided (by each agency or organization)	Safe-D (Federal): \$0 State of Texas match (Non-Federal): \$79,872
Total Project Cost	
Agency ID or Contract Number	Grant No: 69A3551747115 Project: TTI-Student-05
Start and End Dates	Start 3/1/2019, End 8/31/2019
Brief Description of Research Project	This project included four distinct but related exploratory studies of crowdsourced data that could improve roadway safety analysis. The first effort evaluated passively gathered crowdsourced bicyclist activity data from StreetLight Data. The second effort evaluated the pedestrian counting accuracy of the Miovision signal control system. The third effort explored the use of INRIX trip trace data to determine the patterns of origin-destination distributions and developed forty decision rules to define the origin-destination patterns. The fourth effort analyzed crowdsourced Waze data (i.e., traffic incidents) for its ability to identify high-risk locations.
Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	<p>Final research outcomes are as follows:</p> <p><u>Report Deliverable</u></p> <ol style="list-style-type: none"> <li>Final Technical Report, TTI-Student-05: currently being reviewed</li> </ol> <p>Data Deliverables (all currently being prepared for upload to Dataverse)</p> <ol style="list-style-type: none"> <li>StreetLight Data crowdsourced bicycle activity comparison data</li> <li>Miovision pedestrian signal system count comparison data</li> <li>Inrix crowdsourced origin-destination summary data</li> <li>Waze crowdsourced incident and event summary data</li> </ol> <p>Education/Workforce Products</p> <ol style="list-style-type: none"> <li>Spatial analysis algorithms uploaded to Github</li> </ol> <p>Tech Transfer Products</p> <ol style="list-style-type: none"> <li>Das, S., and R. Wang. "Patterns of Origin Destination Travels using Massive GPS Trajectory Data: Insights from Rules Mining,"</li> </ol>

	<p>Submitted for consideration for the presentation at the 99th TRB Annual Meeting, Washington DC, Jan 12-16, 2020.</p> <ol style="list-style-type: none"> <li>2. Li, X., B. Dadashova, S. Turner and D. Goldberg. "Rethinking Highway Safety Analysis by Leveraging Crowdsourced Waze Data" Submitted for consideration for the presentation and publication at the 99th TRB Annual Meeting, Washington DC, Jan 12-16, 2020.</li> <li>3. Research results briefing was held with Miovision and StreetLight Data company representatives in September 2019.</li> <li>4. <ul style="list-style-type: none"> <li>• Research results from the Miovision and StreetLight Data evaluations will be submitted for presentation consideration at the 90th Annual TRB Meeting (Washington DC, January 2020), Texas Trails &amp; Active Transportation Conference (San Antonio TX, March 2020) and the National Travel Monitoring Exposition and Conference (Raleigh NC, June 2020).</li> </ul> </li> </ol>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Validation and increased awareness of several crowdsourced data sets that can improve safety analysis.</p>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	<p>Final technical report currently being reviewed.</p> <p>Project website:  <a href="https://www.vtti.vt.edu/utc/safe-d/index.php/projects/exploring-crowdsourced-monitoring-data-for-safety/">https://www.vtti.vt.edu/utc/safe-d/index.php/projects/exploring-crowdsourced-monitoring-data-for-safety/</a></p>