UTC Project Information	
Project Title	MPC-630 – Automated Real-Time Weather Detection System using Artificial Intelligence
University	University of Wyoming
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology $45,934 Wyoming Department of Transportation $116,381
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Agency ID or Contract Number	69A3551747108
Start and End Dates	August 25, 2020 to July 31, 2022
Brief Description of Research Project	Adverse weather conditions, such as snow, rain, and fog, can directly impact roadway safety, by reducing the visibility and roadway surface friction, negatively affecting vehicles' and drivers' performance. In Wyoming, the number of snow-related crashes are particularly significant. Merely in winter 2018, there were 1,438 snow-related crashes, which resulted in fatalities, extended closures, and significant economic loss. Therefore, detection of real-time weather conditions and providing timely Traveler Information Messages to drivers are crucial for safe driving. The state-of-practice of broadcasting road weather information to travelers has been predominantly based on sporadic and expensive Road Weather Information Systems. With consideration of the limitations of the existing weather detection systems, and in view of the opportunity of the emerging video-image processing technologies, this research aims at developing an affordable weather detection system, which will use video images collected primarily by the WYDOT roadside fixed webcams and secondarily by examining the feasibility of extending the algorithms to snow plows trajectory-level cameras. The product of this research will assist WYDOT with providing road users with accurate and reliable road surface weather conditions, resulting in safer travel decisions and more conservative driving behaviors to mitigate the negative impacts of adverse weather on traffic safety.
Describe Implementation of Research Outcomes (or why not implemented)	

Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project Website	