

UTC Project Information	
Project Title	MPC-668 – Mobile Phone-Based Artificial Intelligence Development for Maintenance Asset Management
University	University of Utah
Principal Investigator	Jianli Chen, Ph.D.
PI Contact Information	Assistant Professor Dept. of Civil and Environmental Engineering University of Utah Phone: (540) 315-0110 Email: jianli.chen@utah.edu ORCID: 0000-0001-7106-7833
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology \$39,890 Utah Department of Transportation \$27,000 University of Utah \$23,605
Total Project Cost	\$90,495
Agency ID or Contract Number	69A3551747108
Start and End Dates	September 24, 2021 to July 31, 2022
Brief Description of Research Project	Road asset management aims at optimizing the allocation of road maintenance resources considering asset conditions and the associated costs. Understanding the current asset conditions is crucial as the first step of efficient asset management practice. Currently, state DOTs mostly rely on the LIDAR inspection for data collection with high operational cost, which can only be completed once per a couple of years. The lack of timely data would inevitably create barriers in daily maintenance works. Hence, there is an urgent need of developing an efficient data collection technology that can gather the required information on a more frequent basis. To tackle this critical issue, this research aims to introduce an efficient, convenient, and affordable approach to collect maintenance asset data on a much more frequent basis. The proposed technology will use a smartphone app to record videos and GPS locations, which can be easily attached to UDOT fleet vehicles for data collection. Then, by leveraging computer vision techniques, this research aims to develop the Artificial Intelligence (AI) packages for extracting and analyzing road asset information automatically from recorded videos.
Describe Implementation of Research Outcomes (or why not implemented)	

Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none">• Reports• Project Website	