Title of Project: Inventories of Roadways and Roadway Edge Conditions for Vehicle Road Departure Study (*Funded by Toyota 2016-17*)

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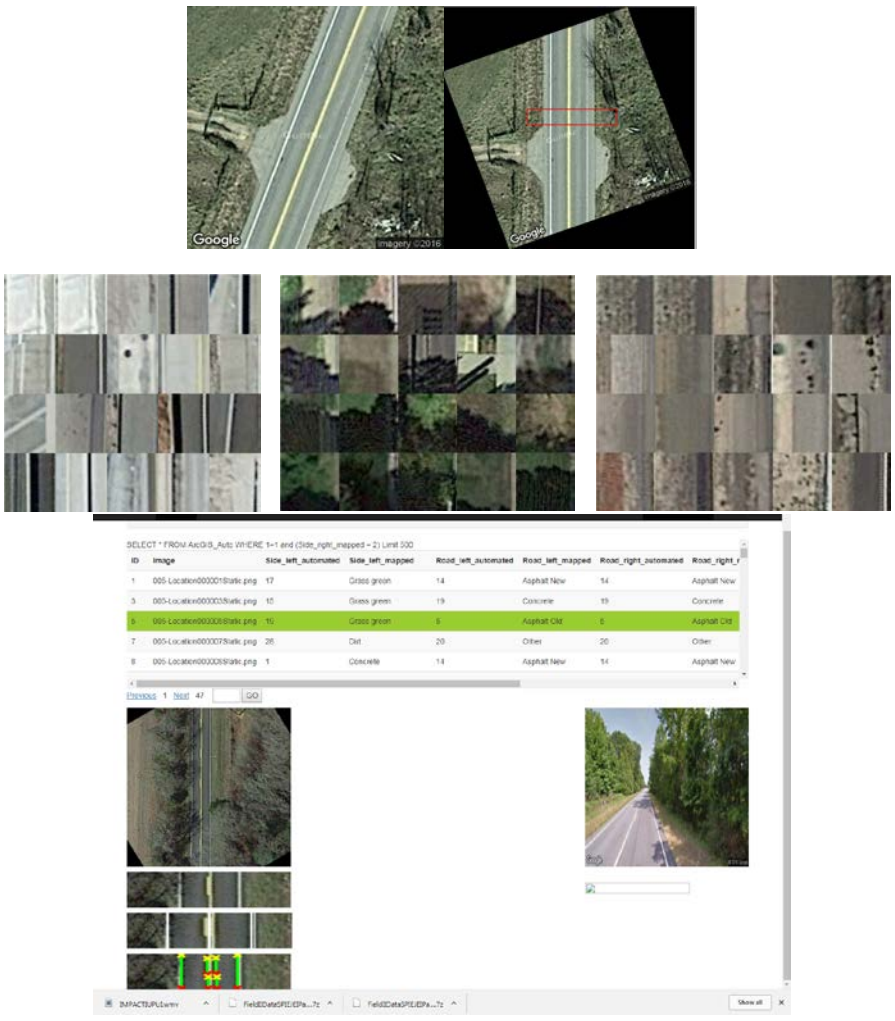
Area: (Task 2 – Determine the on-road/off-road color combination for each of the sampled locations) Image processing, Clustering, Classification

Brief Description: The research takes the defined random US GPS coordinates, which are then entered into Google Aerial View and Google Streetview to collect the photographs of these locations. Both a large number of samples and a large variety of roads are expected in these high-resolution photographs. Therefore, the focus is on clustering these data based on the on-road/off-road colors and textures. In this task, the photographic data input will be mainly daytime photos with good illumination. The major source of data will be satellite images, supplemented by good weather street view images. Weather and other factors will be considered in later tasks.



Source Satellite View of GPS location, input top left, output top right rotated and "snip" location outlined in red, Machine Learning clustered data for road types (middle) asphalt, tree, dirt; Database with Results (bottom)

Link: