

SEMI-AUTOMATED VIDEO ANALYSIS FOR INTERSECTION SAFETY STUDIES

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Using open
source
software to
save hundreds
of hours when
extracting data
from videos



Delaware
T²/LTAP

RESEARCH QUESTION

- Efficacy of Rectangular Rapid Flash Beacon (RRFB) at mid-block trail crossings
- 7 mid-block trail intersections across state
- Observing:
 - Motorist yield compliance
 - Trail user actuation (bike vs ped)



METHODS

■ **Observe intersections using captured video footage**



- Portable camera, easily deployable,
- Have undergrads review videos and extract trail user data

WORKFLOW

- Pre-process hundreds of hours of video
- Generate small video clips of when a trail user is present
- Distribute small clips to undergraduate researchers for data collection
- Aggregate data

PRE-PROCESSING SOFTWARE

- Remove background
- Find & bound moving objects
- Classify bounded objects with Neural Network
- Generate list of timestamps



VERSATILE SOLUTION

- Can be applied to a variety of problems
 - Multi-mode Traffic counts
 - Trajectory pathing
 - Ped-vehicle conflicts