

Robust Automatic Detection of Traffic Activity from Vehicle Perspectives

Introduction

Many DMPs include an introduction. If your DMP includes an introduction, add it here.

This project will develop algorithms and models to enable robust detection of road participants activities and predict future motions. The project will emphasize vehicle points of view.

Types of data produced

Types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project. Click on box size (small | medium | full) for detailed guidance.

The project will produce software that illustrates how such a system could work.

Data and metadata standards

Standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies). Click on box size (small | medium | full) for detailed guidance.

The data used will come from existing public datasets made available in challenges such as the ICCV 2021 Road challenge and the Nvidia AI City challenge, as well as others that may become publicly available. All data used by CMU in this project will have been publicly available in the research community.

Policies for access and sharing

Policies for access and sharing; Provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements. Click on box size (small | medium | full) for detailed guidance.

The data we are using has been approved for public release by the organizers of the challenges and does not contain personal information or identifiable details about individuals.

Policies for re-use, redistribution

Policies and provisions for re-use, re-distribution, and the production of derivatives. Click on box size (small | medium | full) for detailed guidance.

Since the data is publicly available to begin with, we do not expect to re-distribute or share the data. However, we will publish our research results and disseminate the findings at conferences and to our funding partners at General Motors Research.

Plans for archiving & preservation

Plans for archiving data, samples, and other research products, and for preservation of access to them. Click on box size (small | medium | full) for detailed guidance.

Since we are not creating new data, we will only create reports, and results of experiments.

The results of our research will be published in widely recognized and disseminated journals and conference proceedings. Copies of the papers will be kept on Arxiv. Software and computer models will be disseminated on web software repositories such as Github.

Software Sharing Plan

Some NSF solicitations require software sharing plans in the DMP. Please check with your specific solicitation for this requirement.

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Planned Research Outputs

Software - "Argus Road Scene Analysis"

This produced software will include models and computer code to detect and categorize activities of traffic participants as well as predicting future actions.

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Argus Road Scene Analysis	Software	2023-09-09	Open	GitHub		CMU License	None specified	No	No