
Utilizing School Bus Routes to Deliver Meals to Families in Need

A Data Management Plan created using DMPTool

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Introduction

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

In this plan we describe our plans for managing the data to be generated in over the course of this project, which is aimed at generating bus stops and bus routes that optimize the delivery of school meals to students by school buses, and applying them to current pilot school meal delivery programs in the Pittsburgh area.

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.

To types of data will be produced by the project:

(1) Test problems - The project expects to be provided with school meal delivery data from one or more representative school districts in the Pittsburgh area (e.g., student delivery locations, food origin location(s), number of buses, existing school bus routes, ride time constraints on food spoilage time, etc.). From this data, we will construct a set of test problems to allow us to experimentally evaluate the procedures we develop to jointly optimize the determination of bus stop locations and the development of bus routes so that delivery times are minimized.

(2) Performance results - The project will carry out comparative experiments to assess the performance improvement possible relative to existing school bus routes, which were developed for purposes of transferring students to and from school.

It is our intention to make these test problems and performance results publicly available so that they might serve as reference problem benchmarks for future research.

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 project will maintain the identified test problem and performances results data in CSV formats, to provide a portable and light-weight representation for data sharing. We will produce associated documentation to describe the various components of these data products.

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 test problem data sets that we produce will be anonymized before any archiving of the data, and before making data sets publicly available to other researchers. Once these privacy/confidentiality concerns are addressed, we see no further necessary restrictions on the data.

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 it is just test problems and results that the project will be making publicly available, there are no intellectual property rights issues or other restrictions that need to be placed on re-use, re-distribution, and production of derivatives. The project will make this data available as is, and make no other commitment.

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.

The data will be archived in the Intelligent Coordination and Logistics Laboratory repository at Carnegie Mellon University.

Software Sharing Plan

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

At the appropriate point, the test problem and results data generated by this project will be made publicly available, through a link on the Intelligent Coordination and Logistics Laboratory web site.