instruction/readme

1.Artifact Description & Road Map for Evaluation

CCS artifact/

  ├── README.md

  ├── paper.pdf

  ├── main\_artifact\_london.m

  ├── main\_artifact\_nyc.m

  ├── main\_artifact\_rome.m

  ├── functions/

  ├── dataset/

  └── parameters.m

2.Installation & Execution Instructions

**Requirements**

Operating System: Windows, macOS, or Linux

MATLAB Version: R2023a or later

Toolboxes Required

The code was developed and tested using MATLAB R2024a with the Optimization Toolbox and Statistics and Machine Learning Toolbox installed. The toolboxes include the [linprog](https://www.mathworks.com/help/optim/ug/linprog.html) function for linear programming and the [randsample](https://www.mathworks.com/help/stats/randsample.html) function for random sample.

**Installation**

Download and extract the CCS\_artifact package to a local directory.

Open MATLAB.

Set the MATLAB Current Folder to the extracted CCS\_artifact directory.

**Execution**

1.In MATLAB, open one of the following main files depending on the dataset you want to run:

main\_artifact\_rome.m – Runs experiments for the Rome dataset main experiment and figure12,13

Figure10.m

Figure11.m

2.Inside the selected main file, locate the parameter:

repeat\_times = <value>;

**Modify <value> to set the desired number of experiment repetitions. Higher values will produce more stable and accurate final results due to averaging over more runs.**

3.Run the selected main file directly in MATLAB by clicking Run or executing:

main\_artifact\_rome

(Replace with main\_artifact\_nyc or main\_artifact\_london if applicable.)

The program will automatically load data from the dataset/ directory, use functions from the functions/ directory, and parameters from parameters.m.

Output results will be displayed in the MATLAB Command Window and/or saved to the corresponding result files.

3.Input & Output Specifications

**Main Execution File:**

One of the following files must be selected and run in MATLAB:

main\_artifact\_rome.m – Uses the Rome dataset

**Supporting Files and Directories:**

dataset/ – Contains all necessary input data files for the experiments.

functions/ – Contains MATLAB functions used internally by the main scripts.

parameters.m – Stores global parameter settings used by all experiments.

**Configurable Parameter:**

repeat\_times (inside each main script)

Controls the number of experiment repetitions.

Larger values yield more stable and accurate results but increase computation time.

Recommended values for paper reproduction are provided in the main scripts.

**The program will automatically load data from the dataset/ directory, use functions from the functions/ directory, and parameters from parameters.m.**