## Abstract

This appendix presents information on how to access the open-source artifacts produced during this research, namely the processed data used during analysis, as well as the data used during experiments, and the respective R analysis notebooks.


## Artifact check-list (meta-information)

- **Program:** data analysis on serverless ML deployments
- **Data set:** three CSV files containing metrics and traces of the deployments
- **Run-time environment:** R, Python, Jupyter Notebook
- **Metrics:** CPU & memory utilization, autoscaler metrics
- **Output:** plots
- **How much disk space required (approximately)?:** 4 GB
- **Publicly available?:** yes
- **Code licences (if publicly available)?:** GPL
- **Data licences (if publicly available)?:** CC-BY 4.0

## Description

### How to access

The data analysis code can be found on GitHub:
`https://github.com/tiberiuiancu/thesis-experiments-public`.

We release the data in two datasets on Zenodo. The first data set is the data used for analysis in **??**. It can be accessed at: `https://zenodo.org/record/8104182`.

The second data set consists of experiment data collected and analysed in **??**. It can be accessed at: `https://zenodo.org/record/8104192`.

### Software dependencies

The data analysis notebooks rely on Jupyter Notebook to be installed, as well as R and the R kernel for Jupyter.

### Data sets

We release the data used in this research as two data sets: one corresponding to the analysis in **??**, and the second used in **??**.

## Installation

First, clone the GitHub repository:

```
$ git clone git@github.com:tiberiuiancu/thesis-experiments-public.git
```

Note that the git repository contains more information about the project structure.

Second, download the data from Zenodo. The two files part of the data analysis data set must be placed at path "analysis/data/processed", relative to the root of the project. Similarly, the two files part of the experiments data set must be placed at path "experiments/data/processed", relative to the root of the project.

This section assumes you have a valid Python 3 installation. You can install Jupyter Notebook by running the following in the terminal:

```
$ pip install jupyter notebook
```

To install the R kernel for Jupyter (assuming you have R already installed):

```
$ R
$ install.packages('IRkernel')
$ IRkernel::installspec()
```

## Evaluation and expected results

To run the analysis notebooks, first start a Jupyter notebook in the folder that contains the code and data:

```
$ jupyter notebook
```

In your browser, go to *localhost:8888* and navigate to the desired analysis file (ending in *.ipynb)*. Without running any cell, the notebook already contains the plots displayed in the report. Re-running the notebook should always produce the same results.

## Methodology

Submission, reviewing and badging methodology:

- `https://www.acm.org/publications/policies/artifact-review-badging`
- `http://cTuning.org/ae/submission-20201122.html`
- `http://cTuning.org/ae/reviewing-20201122.html`