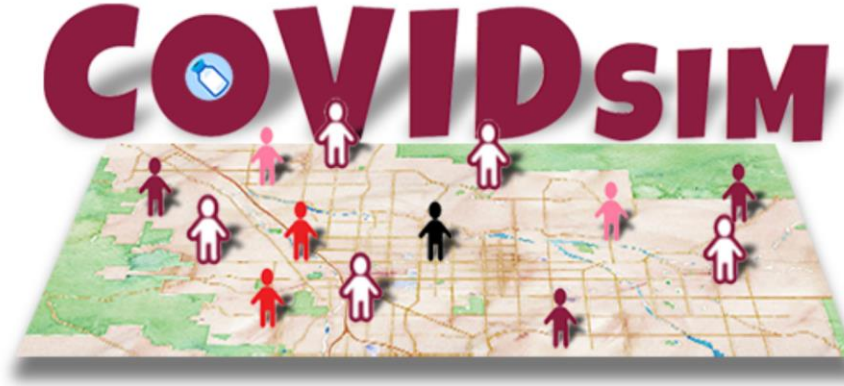


Simulator Dashboard

Simulator Dashboard

About Configuration Simulation Analysis Model Verification Upload Comparison



Wed Dec 14 01:32:13 2022

Welcome to the simulator dashboard!

This dashboard is used for presenting simulator model simulation processing, configurations, and result analysis. Here is a brief introduction about the layout of the website.

About Page

Basic information about the simulator and works.

Configuration Page



1. Introduction to Layout and Structure
2. Quick Demo
3. Todo & Discussion

Dashboard Structure

Navigation Bar Layout

Configuration ▾

General
Map

Simulation Analysis ▾

Simulation Log
Infection
Evacuation
Location

Model Verification

Upload

Comparison ▾

Introduction
Infection
Evacuation
Location
Log

Configuration

General

```
"EXP_NAME": "test_config_file", # Name of the experiment used for saving results
"MAP": "osm_files/TX-To-TU.osm", # Path for the osm file used for building the map
"MAP_CACHE": "cache/TX-To-TU.pkl", # Where to save the map cache
"PATHFIND_CACHE": "cache/TX-pathfind.pkl", # Where to save the pathfind cache

"SEED": 101512, # Seed used for reproducing experiments
"N_AGENTS": 5000, # Number of agents in the simulation, the more agents the better
"THREADS": 8, # How many CPUs should be used for pathfinding

"BUILDING_TAGS": "config/map/tsukuba-tu-building-data.csv", # Path to the file that describes the buildings
"BUSINESS": "config/map/business.csv", # Path for the file that describes the business locations
"GRID_SIZE": 20, # Grid size used when calculating the centroid for buildings
"EVA_CENTR": "config/map/evacuation_center.json", # Path for the file that describes the evacuation center
"STEP_LENGTH": 5, # Each step is one second
"MAX_STEPS": 60*60*24*10, # This is simulating for 7 weeks (49 days) 24 hours
"LOG_LEVEL": "debug",

"DISEASES": ["config/infection/covid.json"], # Path to the diseases that will be simulated
"EVACUATION": {"DISTANCE": 10, "SHARE_INFO_CHANCE": 0.8}, # Agents have 80% chance to share info with others
```

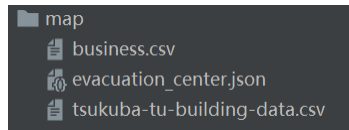
```
"SIM_CONFIG": {
    "condition": ["config/behavioral/condition.csv",
                 "config/evacuation/condition_evac.csv",
                 "config/infection/condition_infection.csv"],

    "default_behavior": "normal",

    "attributes": {
        "basic": ["config/behavioral/attributes/attribute_basic.csv",
                  "config/evacuation/attributes/attribute_basic_evac.csv"],
        "option": ["config/behavioral/attributes/attribute_option.csv",
                   "config/evacuation/attributes/attribute_option_evac.csv"],
        "updateable": ["config/behavioral/attributes/attribute_updateable.csv"],
        "schedule": ["config/behavioral/attributes/attribute_schedule.csv"],
        "profession": ["config/behavioral/profession.csv"]
    },

    "behaviors": {
        "normal": "config/behavioral/behavior/behavior_normal.csv",
        "evacuate": "config/evacuation/behavior/behavior_evacuate.csv",
        "self_isolation": "config/infection/behavior/behavior_symptomatic.csv",
        "severe": "config/infection/behavior/behavior_severe.csv"
    }
}
```

Map



[Return](#)

Simulation Analysis

- Simulation Log
 - Information when the model is loading and running.
- Infection
 - Infection state by time.
 - Behavioral tracking by an agent and its infection state.
 - Some Facts
- Evacuation
 - To be developed
- Location
 - Agent position counts and proportion.

[Return](#)

Model Verification

Discuss it in TODO ...

Upload

Instructions

Upload Model One

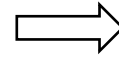
Drag and Drop or Select Files

Upload Model Two

Drag and Drop or Select Files

Upload Model Three

Drag and Drop or Select Files



Comparison Module

Comparison

Model Comparison for Infection Part

Facts

Infection Rate

Infection for Agent

To be developed

Model Comparison for Evacuation Part

Tab 1

Tab 2

To be develop

Model Comparison for Location Part

Agent Location Proportion Summary

To be develop

Model Comparison for Logging Part

Log info from Model 1

Log Info from Model 2

Log Info from Model 3

[Return](#)

Demo

Basic Parameters:

- Number of Agents: 5,000.
- Simulation Duration: 10 days.
- Evacuation Period:
 - Model One: Started at 5th day, ended at 8th day.
 - Model Two: Started at 1th day, ended at 9th day.
 - Model Three: No Evacuation.

TODO – Must Have

- Infection:
 - Infection state overview before and after evacuation by disease type. (needs logs)
 - To be developed ...
- Evacuation:
 - Query a random agent to check its location and activities before and after evacuation. (needs logs)
 - Number of agents evacuated per hour. (needs debugging)
 - Behaviors of agents when getting informed. (needs debugging)
 - To be developed ...
- Location:
 - To be developed ...
- Comparison:
 - Pull over the features developed from Log, Infection, Evacuation, and Location modules.
 - Conclude compared results into tables.

TODO – Nice to Have

- Infection:
 - Query a single agent specifically by its conditions (exposed, severe, ...)
- Evacuation:
 - Query a single agent specifically by its professions.
- Location:
 - Combines with map data.
- Map:
 - Dynamic map
- Comparison:
 - Downloadable
- Model Verification: ...
- About Dashboard:
 - Refactor to improve dashboard performance
 - Data to large: preprocessing



Thank you!