Multi–Agent Ride Sharing Simulation
with interactions of Epidemic Outbreak

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A multi-agent testbed to simulate the action and interactions of the drivers and passengers with an AI-empowered order dispatcher based on DiDi dataset. Equipped with parameters of the disease and behaviors to study the interaction effect between technology, disease and people in such complex environment.

Control   General   Virus   Overview Chart   Driver Chart   Display

Virus

% of Drivers infected (0-100)

50

% of Tasks infected (0-100)

50

% of Drivers with Mask (0-100)

10

% of Passengers with Mask (0-100)

10

% of Mask Effectiveness (0-100)

95

Evolve Probability (%)

0.5,1

Spread Probability (%)

4,9,13

Task

Type of Value for Task

Distance between start and end

Value per 1km (Multiplier)

1

Peak hour rate (Multipler)

1.5

Type of Reputation given by Task

Fixed

Reputation value (0-5)

5

Driver

Travelling mode

Travel by node

Travel by Node Interval (in ms)

50

Speed (km/hour)

120

Boundary

Enter a number of drivers to spawn

400

Spawn

Main

Disconnect   Submit Paramaters   Retrieve Orders   Start

Generate Virus CSV   Generate Drivers' Stats CSV

Tasks to Drivers   Drivers to Tasks

Spread count of virus

● Healthy
● Virus level of Mild
● Virus level of Moderate
● Virus level of Severe