Python and R Support

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Python and R support

These helper libraries can help you get your MATSim networks, output trips, events, etc, into tabular forms suitable for data science!

MATSim-Python
pypi.org/project/matsim-tools/ **pip install matsim-tools**

New: calibration and scenario generation scripts under development

MATSim-R
vsp.berlin/matsim-r/ **devtools::install_github("matsim-vsp/matsim-r")**

New: vignette documentation, many plots from output_trips

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MATSim SimWrapper Contrib

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Add one line to get a basic dashboard of your MATSim run

This <u>one crazy trick</u> adds a
SimWrapper dashboard to
your MATSim run:

controler.addOverridingModule(new SimWrapperModule())

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controler.addOverridingModule(
**   new SimWrapperModule()**
)

SimWrapper Contrib Docs:
github.com/matsim-org/matsim-libs/tree/master/contribs/simwrapper

Berlin Open example
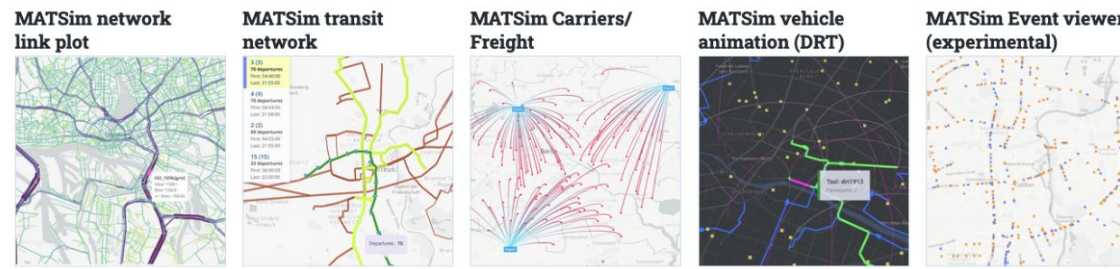simwrapper.github.io/site/public/de/berlin/berlin-v6.1/output/berlin-v6.1-10pct

Leipzig example
simwrapper.github.io/site/public/de/leipzig/projects/namav/v1.3.1/drt-city-wide

Java source example
src/main/java/org/matsim/dashboard/BerlinDashboardProvider.java
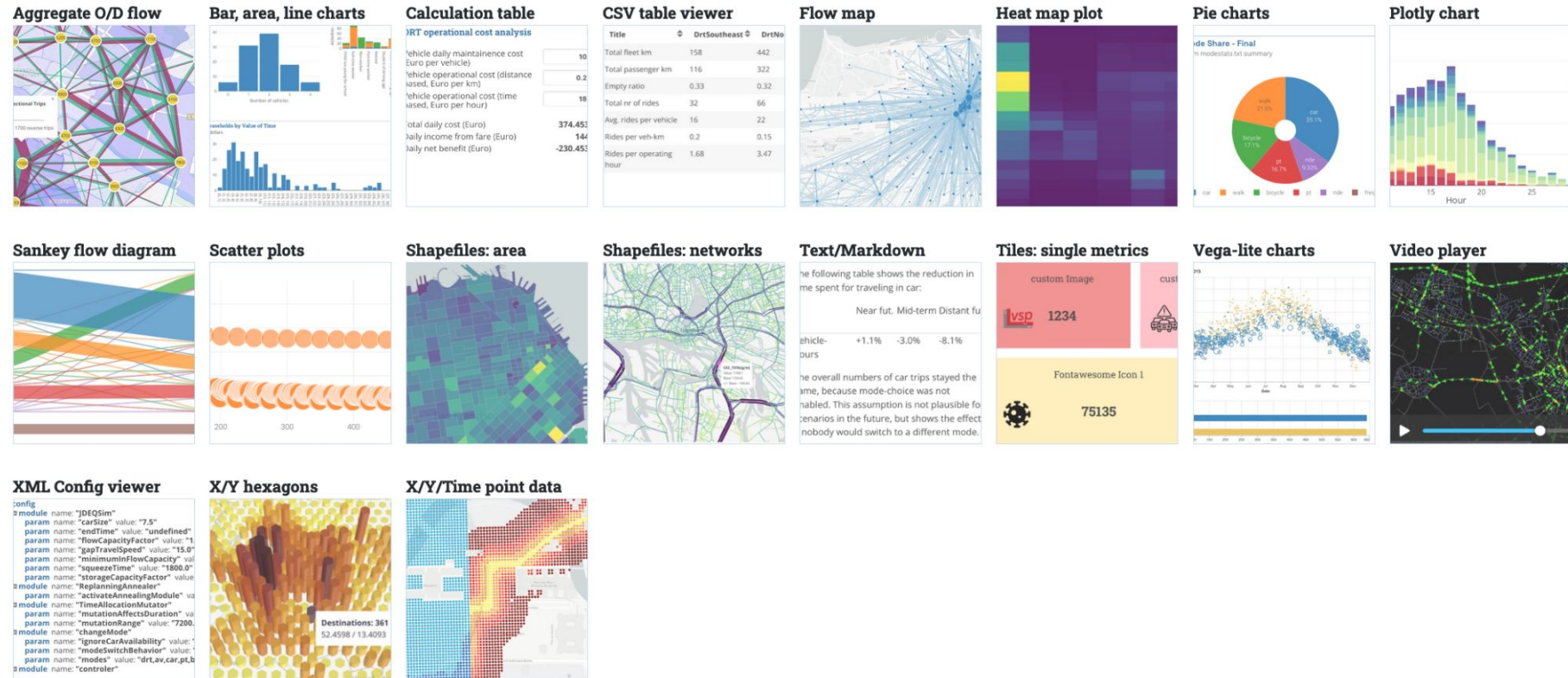
SimWrapper
New Features

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SimWrapper 3.x

New things!

let's go thru
these
until
I run
out of time :-)

MATSim network link plot • MATSim transit network • MATSim Carriers/Freight • MATSim vehicle animation (DRT) • MATSim Event viewer (experimental)

Statistical charts and maps

These visualizations work with any dataset, generally using CSV text format or XML files.

Aggregate O/D flow • Bar, area, line charts • Calculation table • CSV table viewer • Flow map • Heat map plot • Pie charts • Plotly chart

Sankey flow diagram • Scatter plots • Shapefiles: area • Shapefiles: networks • Text/Markdown • Tiles: single metrics • Vega-lite charts • Video player

XML Config viewer • X/Y hexagons • X/Y/Time point data

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SimWrapper 3.x - new stuff - "easy mode"!!

1. Very large network support - "Avro" file format - 1,000,000 links

2. Point data / grid maps

3. Zonal data / matrix viewer

4. Layered Maps (in development)

5. Github Gists

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What's Next

SimWrapper and the **Python** and **R** libraries acquire features and bugfixes based on what our users ask for.

Their use is now quite regular at VSP Berlin for many projects, and also in several agencies worldwide.

If there is something that would make thes tools fit <u>your use case</u> better, come talk to me!

Thanks!

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github.com/billyc

simwrapper.github.io

vsp.berlin/matsim-r

pypi.org/project/matsim-tools