

data pre-
processing



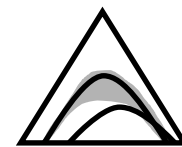
EDA

$$\frac{\partial S}{\partial t} = \dots$$

modeling &
simulation



post-
processing



comparison
&
assessment

modeling

simulating

**Transformation of
agents to aggregate
view:**
`agents_to_aggregate`

SIR specific EDA:

- group exploration:
`geom_aggregate`
- general visuals:
`geom_point` or `path`
+ `coord_tern`

Raw Data

Outside modeling
-or- applications of
a
pre-built model

Model simulation:

Bernoulli
approximation of ODE
state models:
- `simulate_agents` -or-
`simulate_SIR_agents`
+
`agents_to_aggregate`

**Outside model
simulation**

- Time invariant transformation,
`filament_compression`
- Filament and l_2 distance
through
`dist_matrix_innersq_direction`
++
`tidy_dist_mat` + `not_df`

`fortify`
(aggregate view)

Prediction region (creation and
examination):

- SIR: `geom_prediction_band`
`geom_convex_hull`
`create_delta_ball` -structure

+ containment: `contained`

**(Distance-centric) extremeness
assessment** through:

- pseudo-density:
`distance_pseudo_density_function`
- or depth estimation
`distance_depth_function`,
`local_distance_depth_function`

contains time-invariant tools