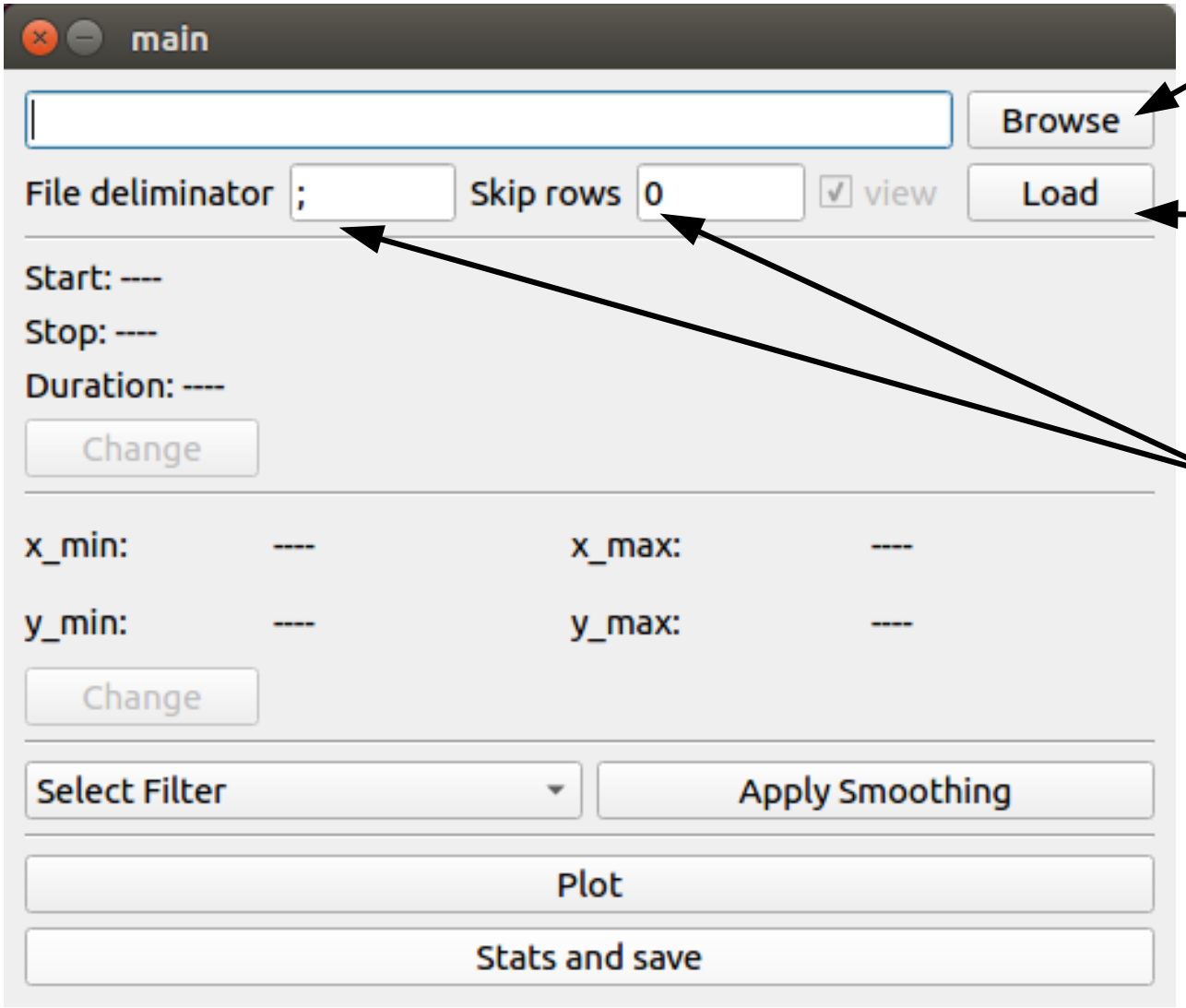
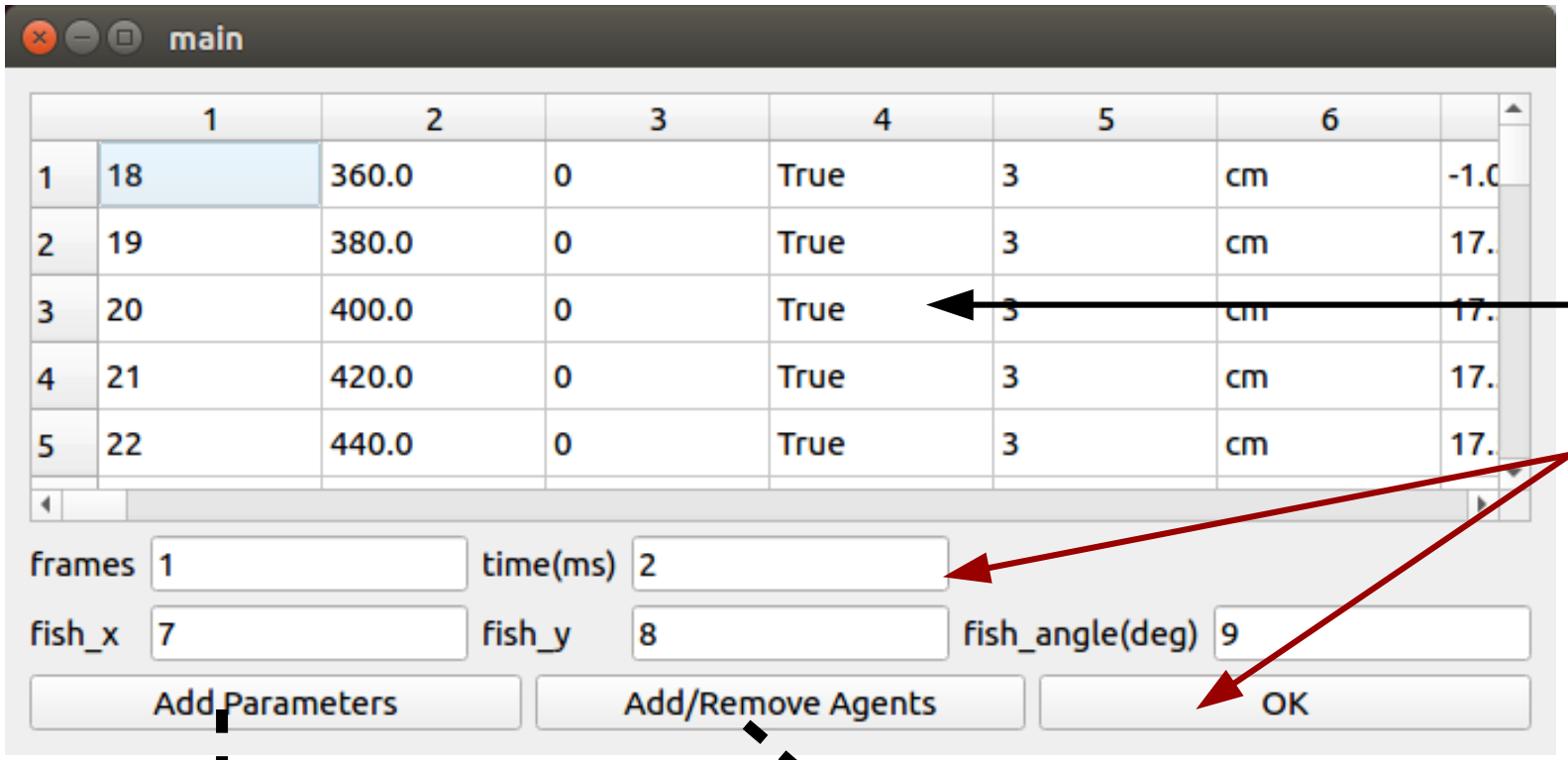
# Start:




Click to select datafile

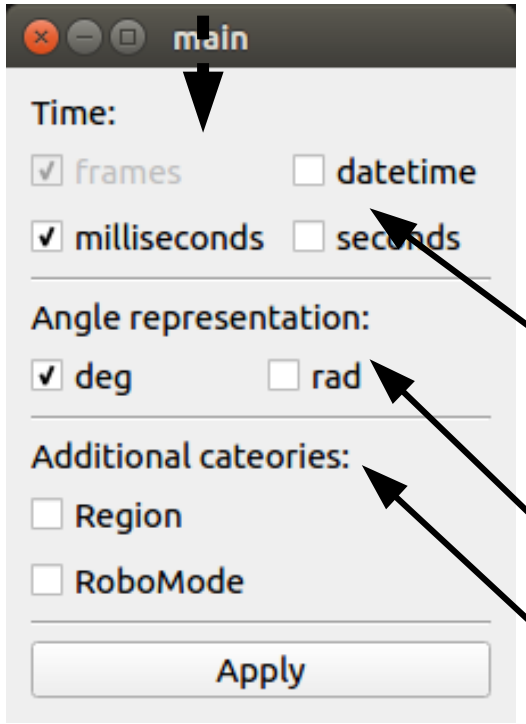
Load selected file into application

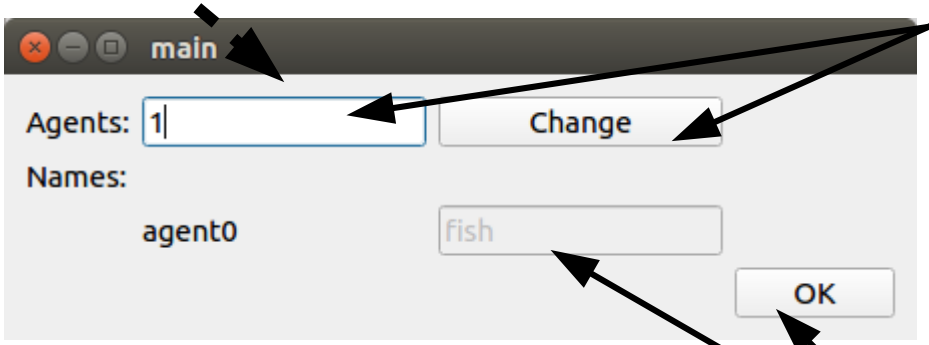
Settings of the original file




Data of original csv file

Set the column number of each variable and confirm with ‚OK‘




Set number of agents you want to study and press ‚Change‘ confirm

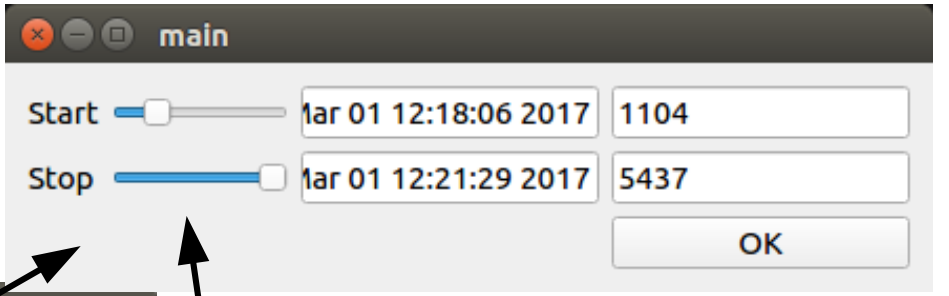
Choose time format (a column with framenumber is always necessary)

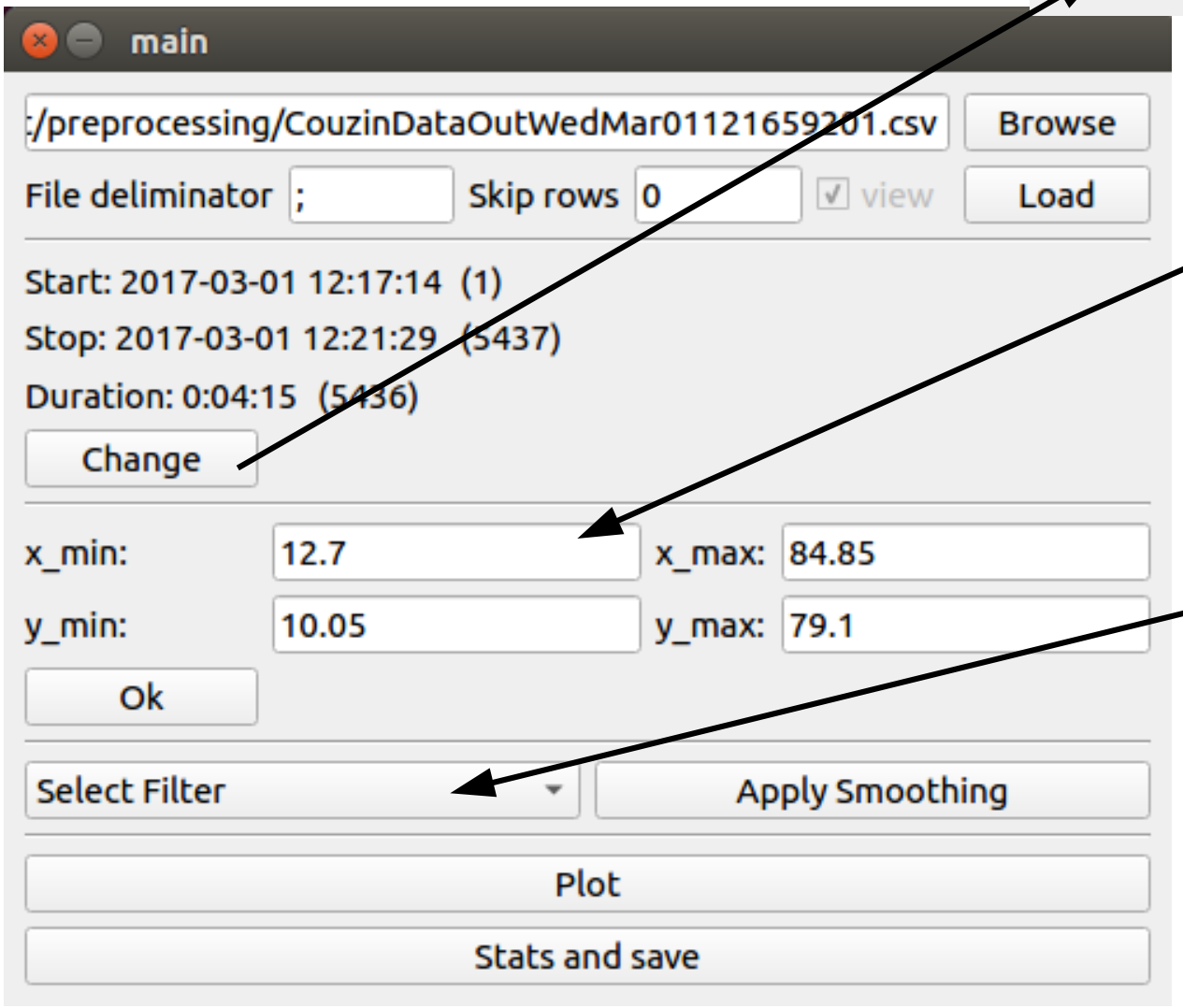
Choose angle representation

Add additional features

Give the agents individual names which will be used in the results-files and confirm with ‚OK‘

# Main after loading data:



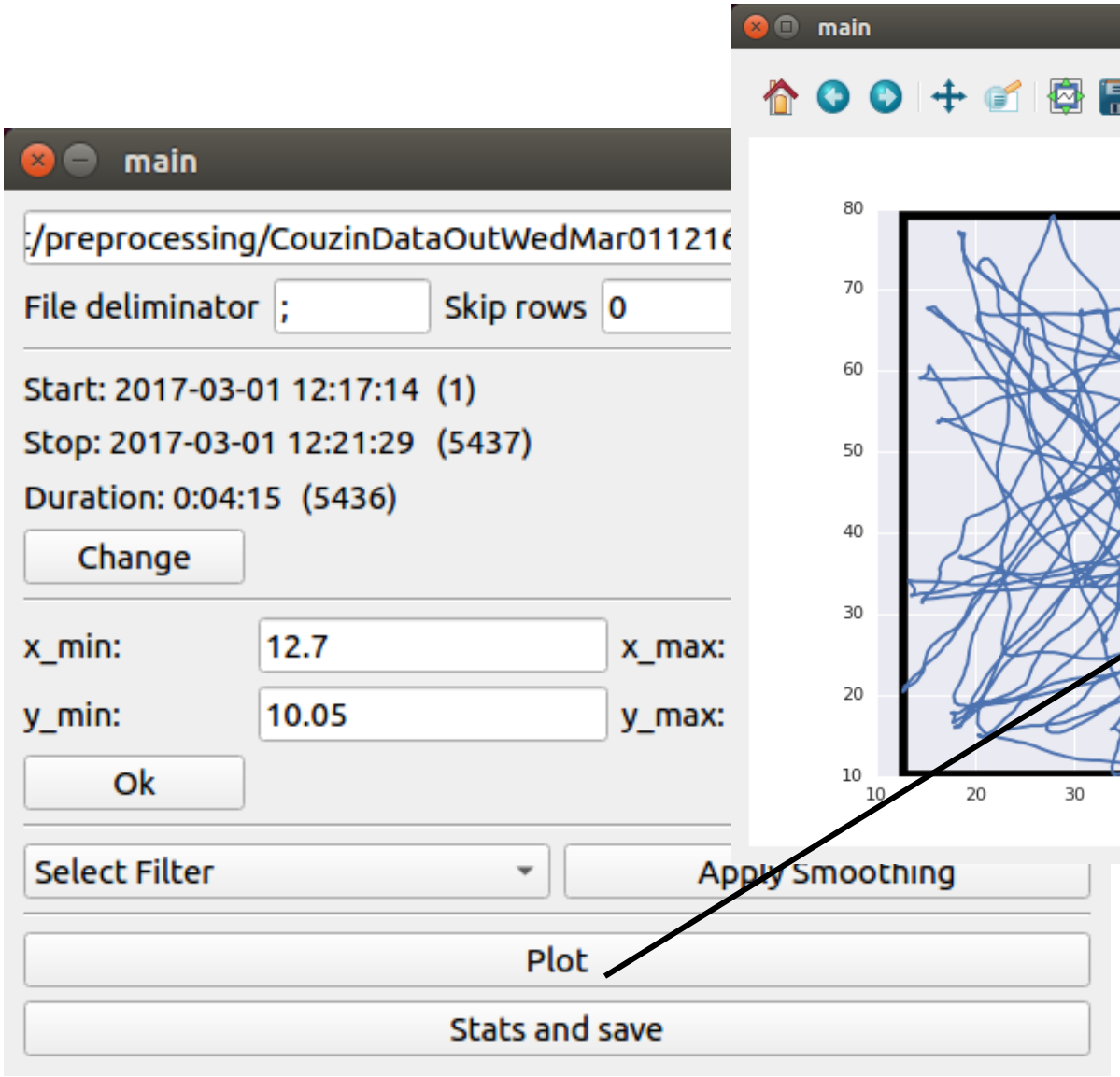



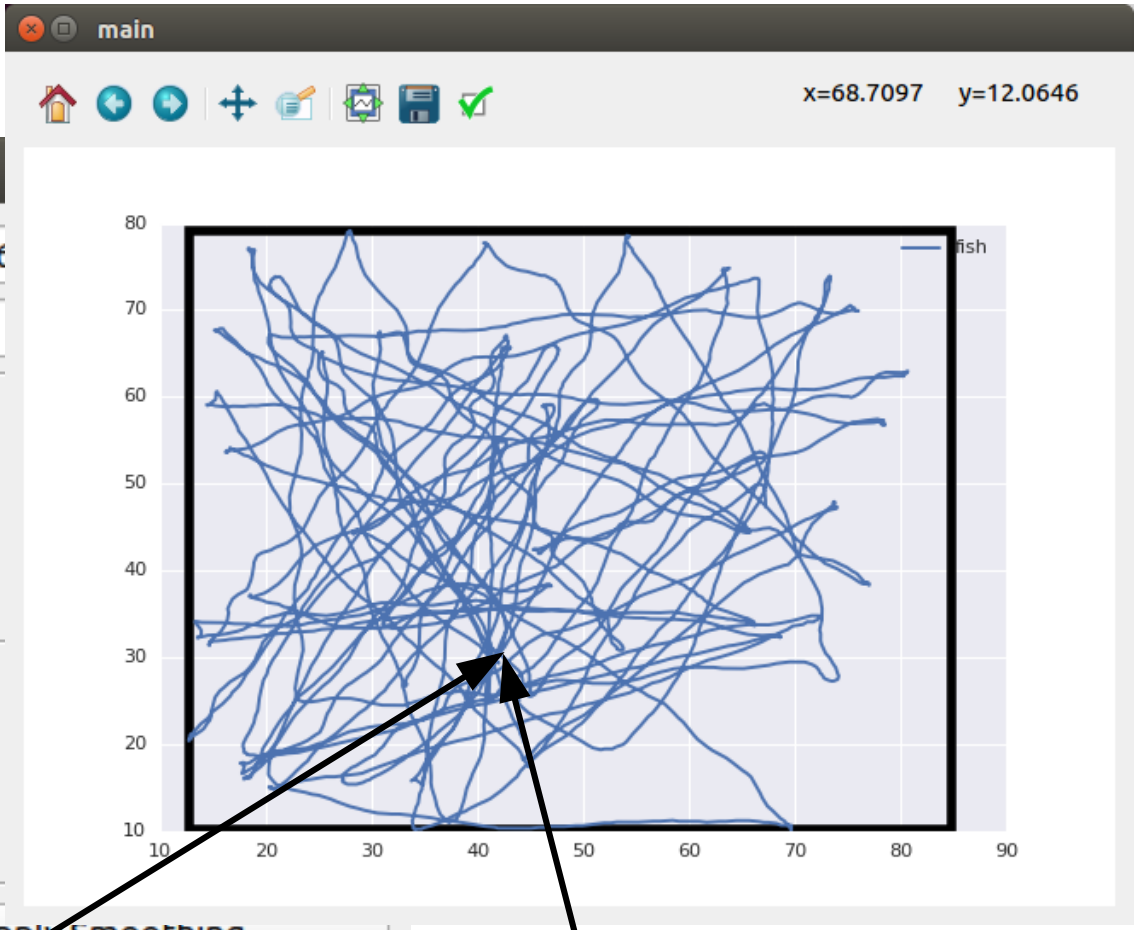

The sliders allow to set start and stop time for analysis. (confirm with ‚OK‘)

The default values are inferred form position data. Can be adjusted to match borders of arena or a subspace of the whole arena (confirm with ‚OK‘)

Select filter to smooth trajectory (currently only median filter with k = 5). (apply with ‚Apply Smoothing‘)

# Plotting:




Plot of trajectory (here only one agent). Black line indicates selected borders. Plots can be adjusted via the toolbar and have to be saved individually.

# Results:

Clicking ‚Stats and save‘ uses the selected options (Agent number and names, Time and Angle Format, Start/Stop time, x and y limits) and calculates basic statistics. Each time the application is called a folder is created with the current date and subfolders for each time the application was called
(e.g Folder 2018_02_08 with subfolders 000, 001, 002, …)

Each of the subfolder will contain 2 .csv files:

1. timelines.csv with columns:

**frames,**
**time** (in selected format),
**distance** between pairs of agents
for each agent:
- **x-position,**
- **y-position,**
- **angle,**
- **x-velocity,**
- **y-velocity,**
- **absolute speed**

2. info.csv with columns:

**Source:** original datafile
**x_min:** selected border value
**x_max:** selected border value
**y_min:** selected border value
**y_max:** selected border value
**Start:** selected start time
**Stop:** selected stop time
**Filtered:** true or false dependeing on wheter or not smoothing was applied

For each agent:

**trajectory_length**: total lengh of agents trajectory
**mean_speed**
**var_speed**
**min_speed**
**25%_speed:** i.e 25 percentile
**median_speed**
**75%_speed**
**max_speed**

For each pair of agents:

**mean_dist**
**var_dist**
**min_dist**
**25%_dist**
**median_dist**
**75%_dist**
**max_dist**