Indoor Map Construction Algorithm:

1. Clean trajectory DB:
   1. Separate trajectories to different floors (mark floor switches).
   2. Discard trajectories (or parts of them) with low fix frequency
   3. Trim fixes outside of buildings (Open Street Map interface)
   4. Put together clean trajectories into different trajectory collection for each floor.
2. TRACLUS algorithm (for each collection):
   1. Trajectory Partitioning:

Partition each of the trajectories in the collection into different segments using the MDL Principle.

* 1. Segment Clustering:

Create clusters of segments using a density based clustering algorithm.

1. Skeleton Formation (for each collection):
   1. Calculate approximate shape for each cluster using corridor width estimation, and alpha-shapes.
   2. Connect clusters to each other:

If a cluster overlaps another, connect them to form a skeleton.

* 1. Keep track of navigable and unnavigable areas.

Unite navigable Areas, Dispose of small unnavigable ones.

1. Link Floors (Cross collections):

Detect elevators and stairs with floor switching. Connect skeletons of floors at floor links.

1. Constructed Map:
   1. Skeleton Graph of navigable area.
   2. (Optional) Plot corridors.

Over architectural sketch.

First simulate, after that check on real data.

Need to solve: get trajectories.