



LiDAR

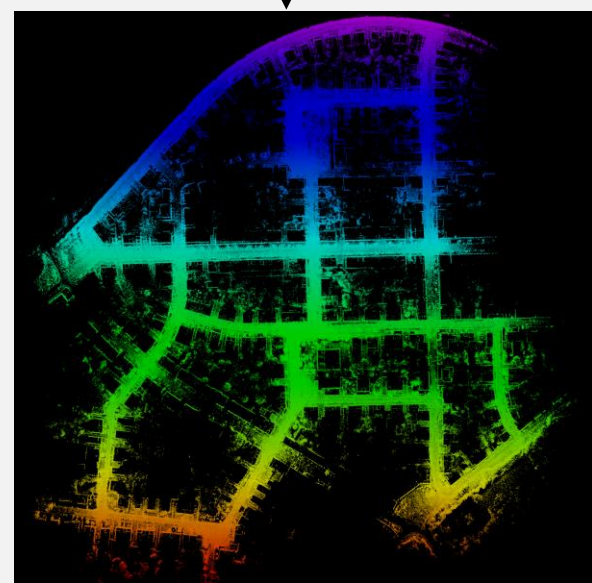


Local maps of voxels

*Voxel mapping
and coordinate
calculation*

FIFO update

*Pose transformation
and management*



Global map

Dynamic weight linear systems

*Calculate the
kernel weights*

*Construct the
Jacobian matrix*

*Building linear
systems*



Adaptive ICP registration

Initialize pose

*Iterate update
pose*

*Judgment
convergence*



Adaptive motion prediction

*Collect
historical
poses*

*Weighted
historical poses*

*Predict
next pose*

Adaptive error threshold

*Calculate
velocity and
acceleration*

*Calculating
motion
differences*

*Dynamic
weight
adjustment*

*Update
adaptive
threshold*

