

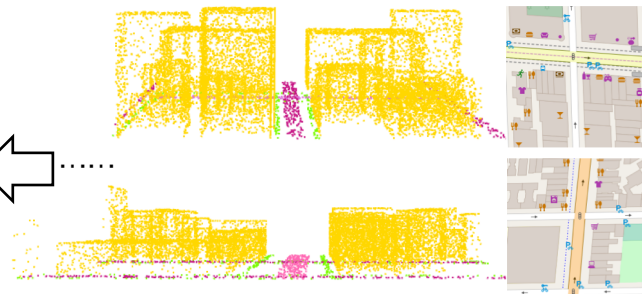
## Ground-view Images



## Contrastive Learning

**Multi-modal map fusion**  
**Cross-view feature alignment**

## Multi-modal Maps



**Connectivity  
Information**



**Geo-referenced  
Map Database**

**Maps of New Exploring Area**



## Geolocalization tasks:

**Single-image based  
or Route based**



**observe**

Where  
am I ?

**query**

**localize**

I am at  
40.7379,  
73.9961 !

