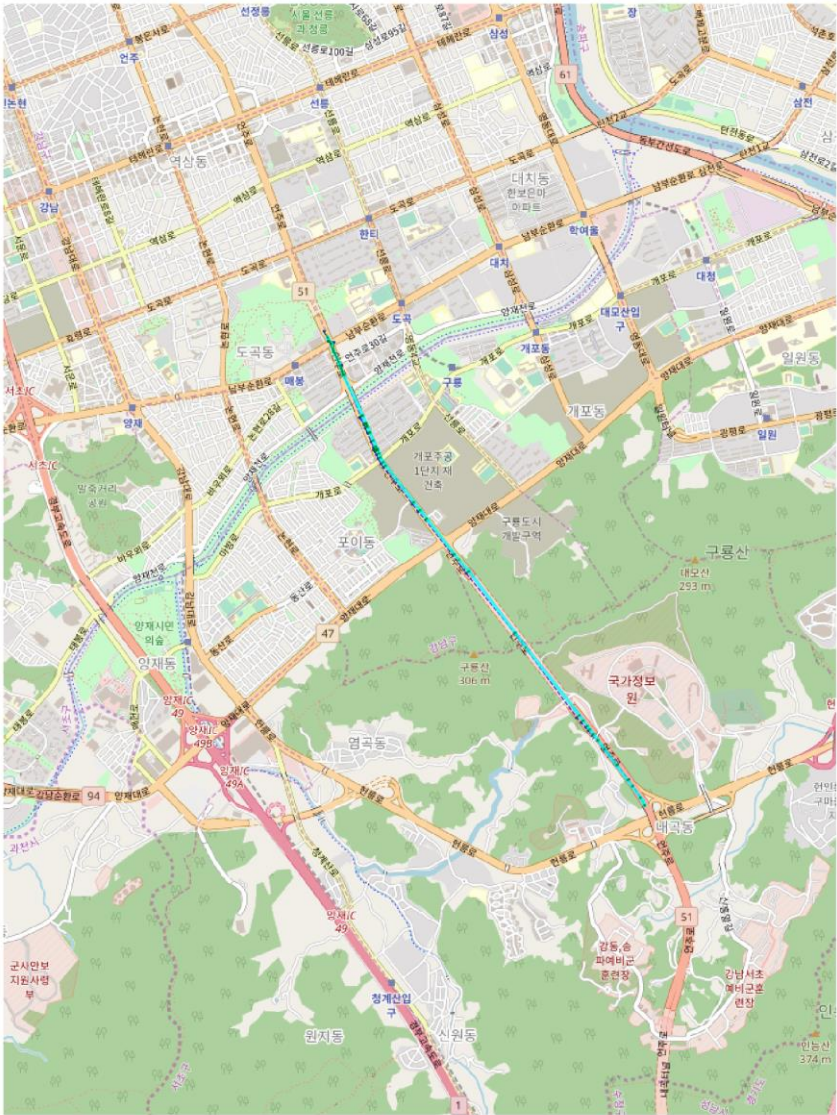
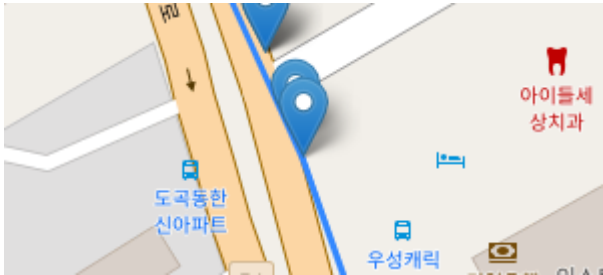


Result



앞 100



적용



기존

뒤 100



적용



기존

보완점

1. 맵이 정확하지 않음

대상지인 도곡로의 경우 약 100m의 구간의 데이터만 들어가 있음
링크의 시, 종점노드만 연결하다보니 그 사이가 무시되는 경향
add_edge하면서 양방향 링크로 들어가지 않고, 한 방향으로만 들어감

2. 구간 별 연장이 다름: 맵이 정확하지 않아서 생기는 문제

일반도로의 경우 링크의 연장이 500m이내, 고속도로의 경우 2000m 이상임: 대상지에 따라 파라미터 조정 필요

고속도로의 경우, max_dist값을 크게 해야 매칭이 되는데 매칭이 정확하지 않은 문제가 있음

DistanceMatcher Parameter

```
:param map_con: Map object to connect to map database
:param obs_noise: Standard deviation of noise
:param obs_noise_ne: Standard deviation of noise for non-emitting states (is set to obs_noise if not given)
:param max_dist_init: Maximum distance from start location (if not given, uses max_dist)
:param max_dist: Maximum distance from path (this is a hard cut, min_prob_norm should be better)
:param min_prob_norm: Minimum normalized probability of observations (ema)
:param non_emitting_states: Allow non-emitting states. A non-emitting state is a state that is
    not associated with an observation. Here we assume it can be associated with a location in between
    two observations to allow for pruning. It is advised to set min_prob_norm and/or max_dist to avoid
    visiting all possible nodes in the graph.
:param non_emitting_length_factor: Reduce the probability of a sequence of non-emitting states the longer it
    is. This can be used to prefer shorter paths. This is separate from the transition probabilities because
    transition probabilities are averaged for non-emitting states and thus the length is also averaged out.
:param max_lattice_width: Restrict the lattice (or possible candidate states per observation) to this value.
    If there are more possible next states, the states with the best likelihood so far are selected.

:param dist_noise: Standard deviation of difference between distance between states and distance
    between observatoins. If not given, set to obs_noise
:param dist_noise_ne: If not given, set to dist_noise
:param restrained_ne: Avoid non-emitting states if the distance between states and between
    observations is close to each other.
:param avoid_goingback: If true, the probability is lowered for a transition that returns back to a
    previous edges or returns to a position on an edge.

:param args: Arguments for BaseMatcher
:param kwargs: Arguments for BaseMatcher
"""
```

```
matcher = DistanceMatcher(map_con,
                           max_dist = 600, min_prob_norm=0.0001,
                           non_emitting_length_factor=0.75,
                           obs_noise=100, obs_noise_ne=50,
                           dist_noise=100,
                           max_lattice_width=5, avoid_goingback=True,
                           non_emitting_states=True)
states, last_idx = matcher.match(track)
```