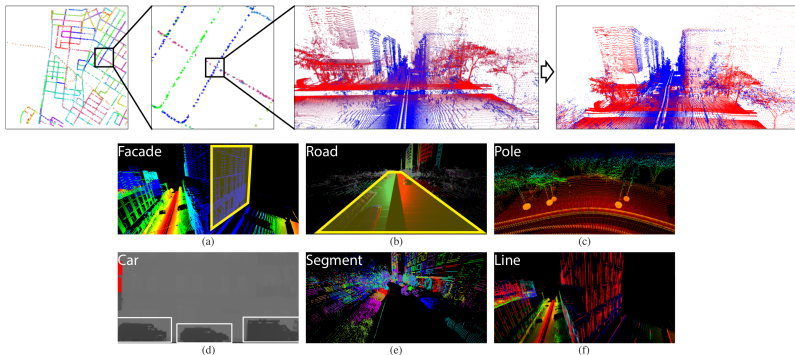


Semantic Alignment of LiDAR Data at City Scale

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- ▶ Alignment of LiDAR data collected with Google Street View cars in urban environments
- ▶ Problems with current approaches:
 - ▶ GPS do not work well in city environments with tall buildings
 - ▶ Local tracking techniques (integration of inertial sensors, SfM, etc.) drift over long ranges, causing warped and misaligned data by many meters
- ▶ Approach: semantic features with object detectors (for facades, poles, cars, etc.) that
 - ▶ can be matched robustly at different scales
 - ▶ are selected for different iterations of an ICP algorithm
- ▶ Better than baselines on data from New York, San Francisco, Paris, and Rome