Understanding High-Level Semantics by Modeling Traffic Patterns

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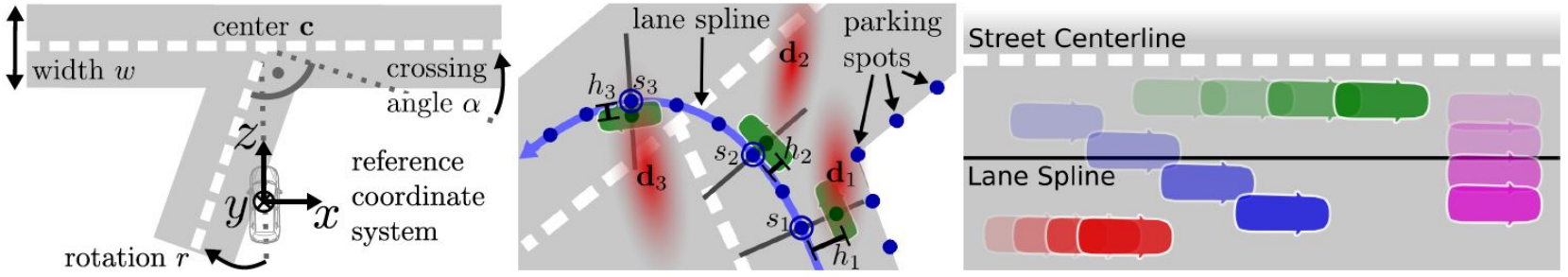

(a) Geometry model (b) Tracklet model (c) Lane Model

- Understanding the semantics of outdoor scenes in the context of autonomous driving
- Generative model of 3D urban scenes enables to reason about high level semantics in form of traffic patterns
- Learn the traffic patterns from real scenarios
- Novel object likelihood which models lanes much more accurately and improves the estimation of parameters such as the street orientations
- Small number of patterns is sufficient to model the vast majority of traffic scenes
- High-level reasoning significantly improves the overall scene estimation as well as the vehicle-to-lane association