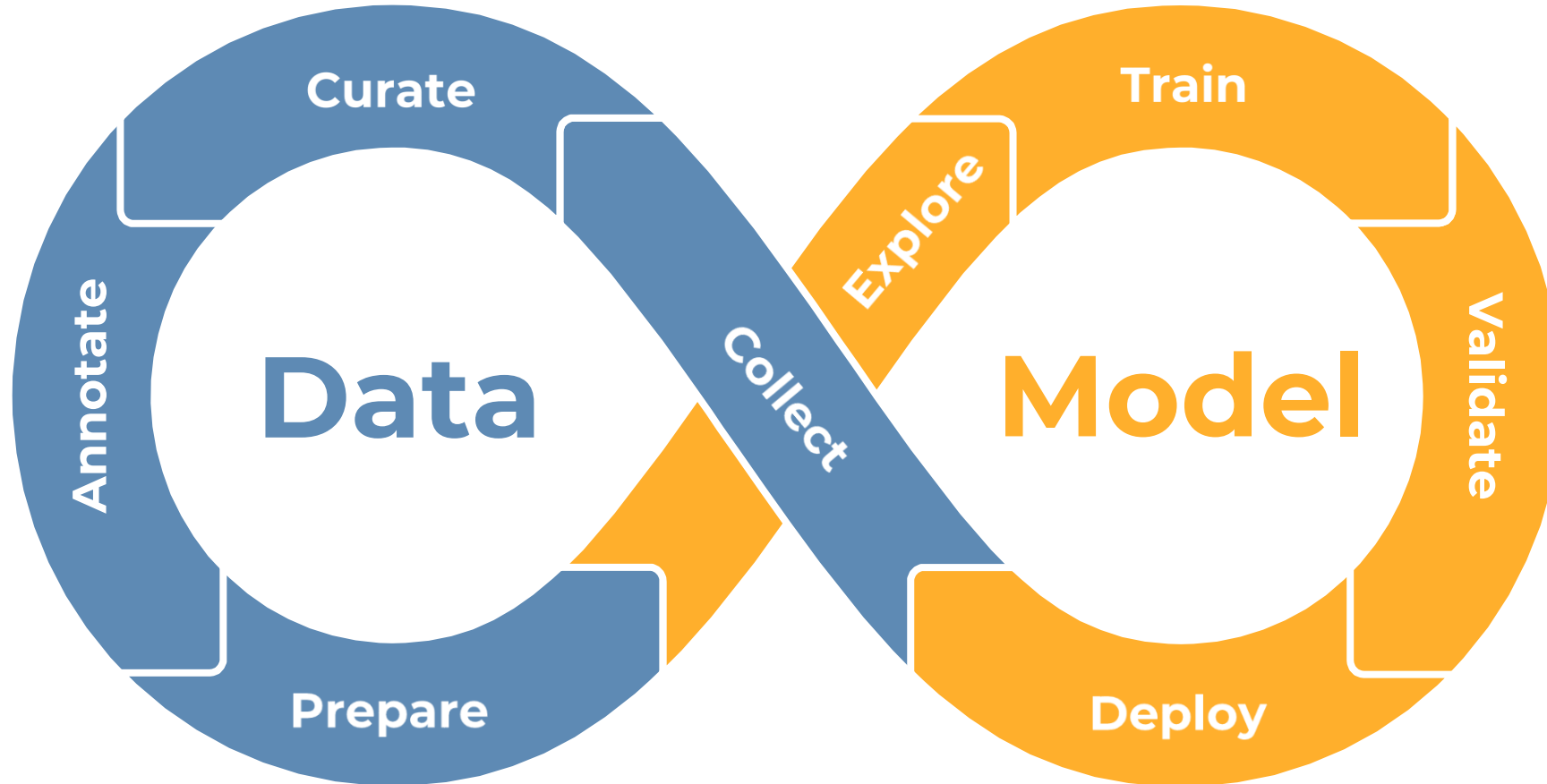




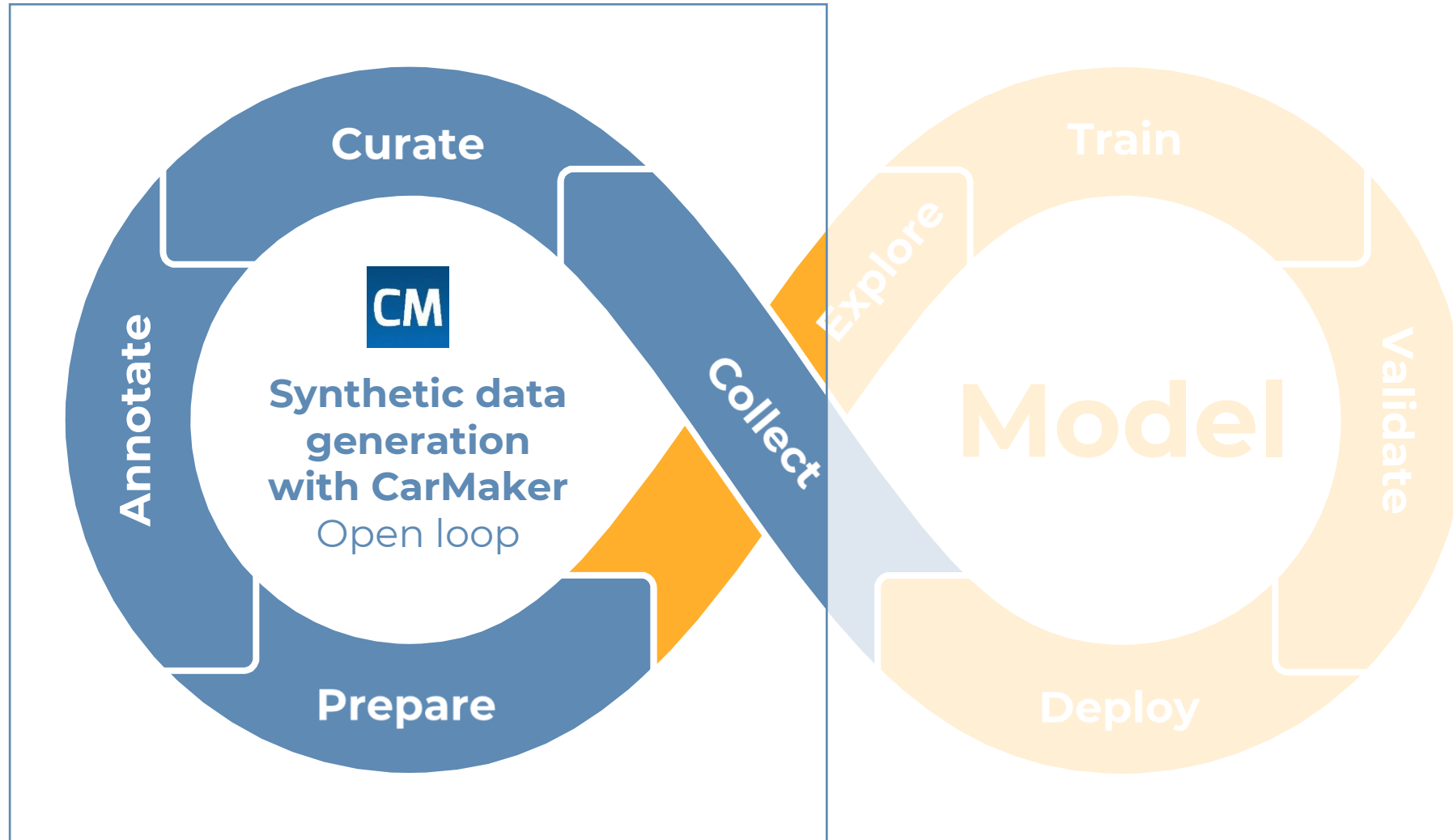
CarMaker for generating Data to train AI-based Software

DSC 2024

MLOps Data Pipeline



MLOps Data Pipeline



How to Generate Synthetic Data with CarMaker



Rich environments & scenarios



Realistic sensor data



Configurable annotations

Dataset generator



Data storage

Generating Scenarios

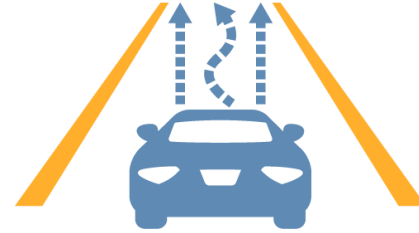


1 - Procedural scenarios

- Scenario exploration
- Endurance testing

Requirements

- Procedural generation of road, traffic and environment
- Procedural generation of 3D scenery



2 - Scenario variations

- Requirement-based testing
- Systematic exploration of large parameter spaces

Requirements

- Parameterizable scenarios
- Variation of static & dynamic elements



3 - Edge cases

- Creating rare situations rarely encountered in reality
- For perception, fusion and planning training & test

Requirements

- HD Scenario quality
- Custom 3D assets

1 - Procedural scenario generation

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/IPGRoad_PyWrapper_v05/CreateRoadFile.py')  
  
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:/IPG/carmaker/win64-13.0.1/Movie/Textures/Inf
```



2 - Scenario variations



2 - Scenario variations



2 - Scenario variations



2 - Scenario variations



2 - Scenario variations



3 - Edge cases



3 - Edge cases



3 - Edge cases





3 - Edge cases



3 - Edge cases





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