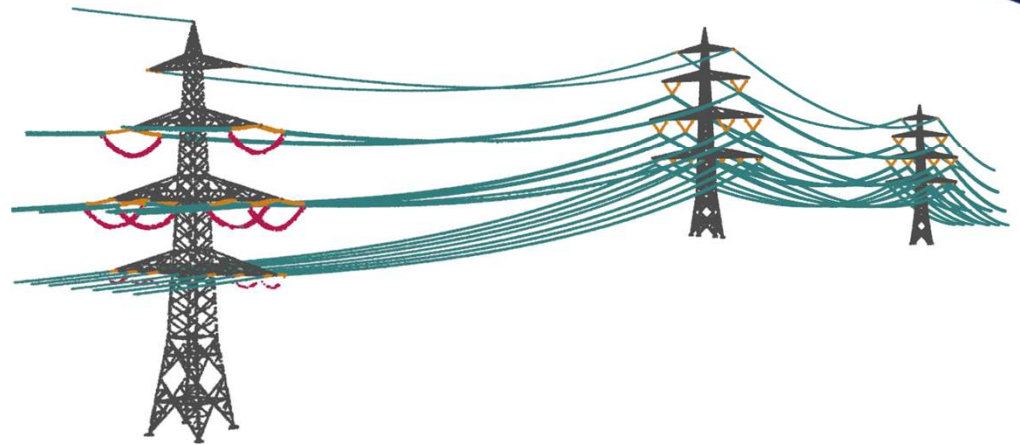




**Automatic Classification of
LiDAR data using Deep Learning**



Artificial Intelligence (AI)

What is possible...

.....

- Beat world champion in checkers, chess, go
- Automatic image and voice recognition (Alexa, Siri, ...)
- Object recognition in image data e.g. also tumors in CT scans
- Recommender Systems (Netflix, Spotify...)
- ...

What is not possible (yet) ...

.....

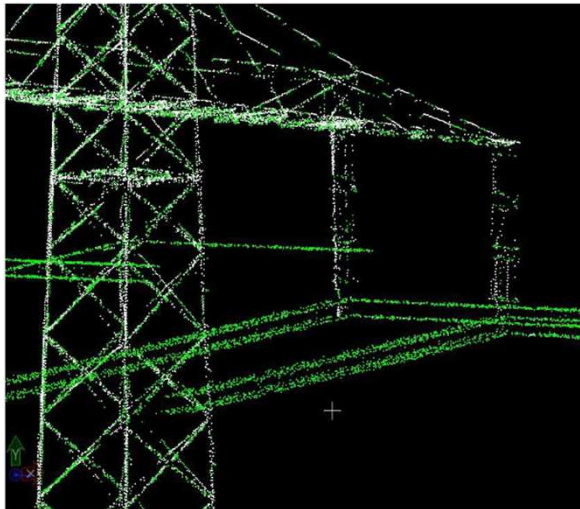
- Autonomous driving
- Complete human (inter-)action
- ...

AI – Training and Classification

1. Stage: Training

.....

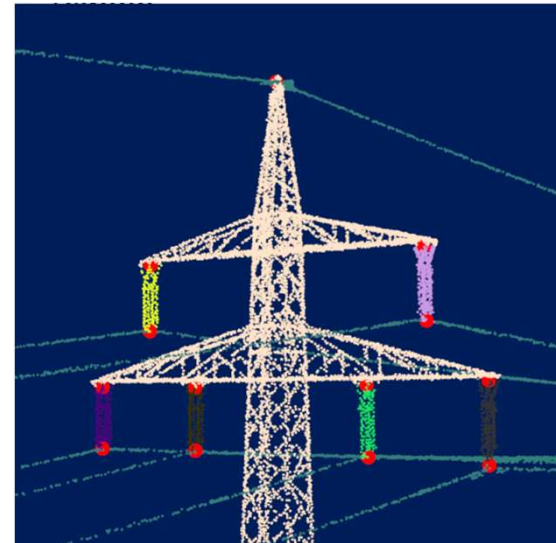
- Based on manually classified LiDAR-Data

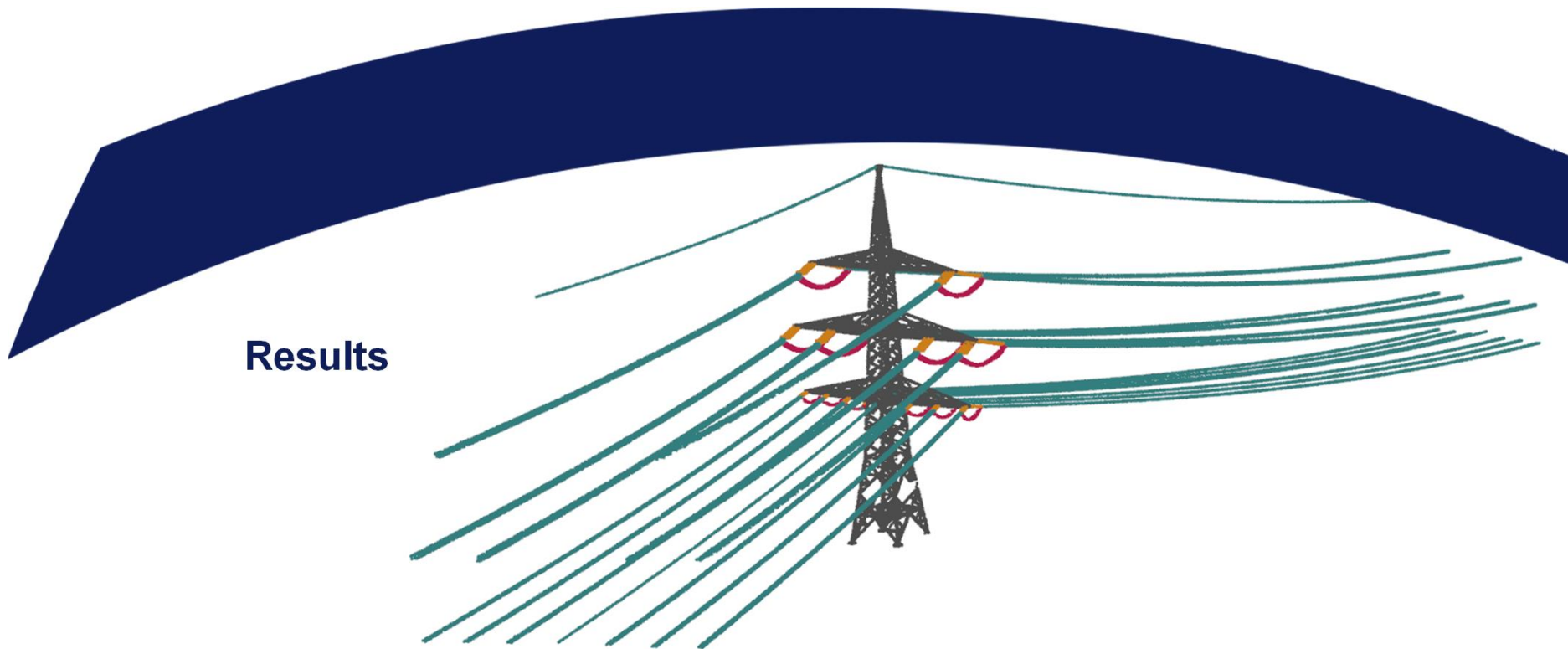


2. Stage: Automatic Classification

.....

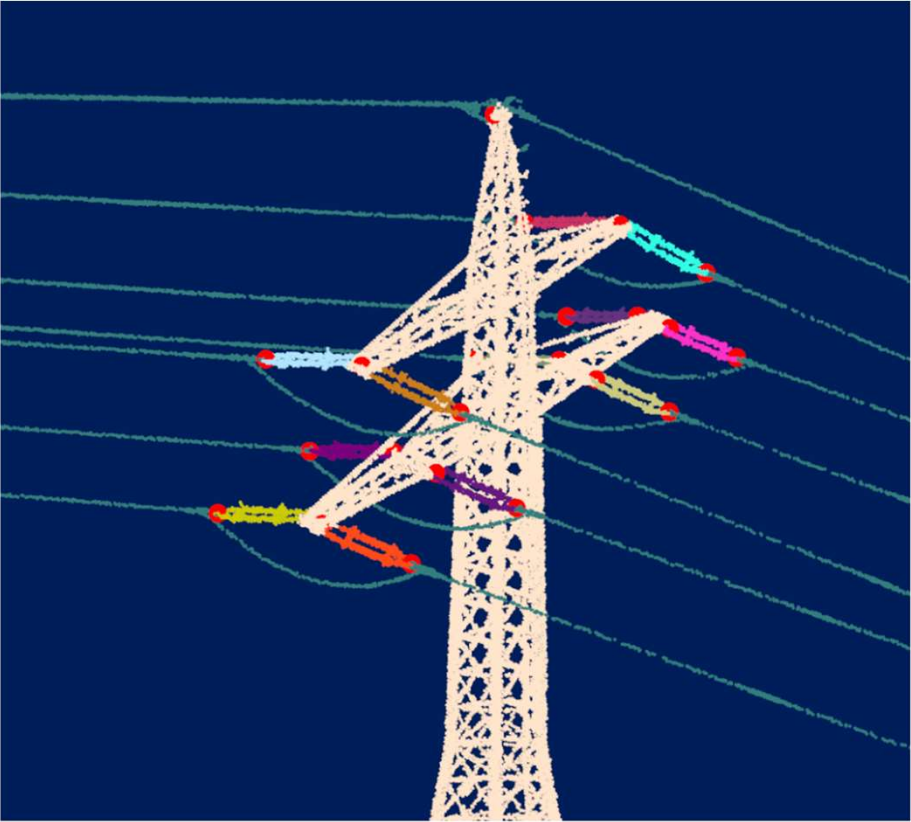
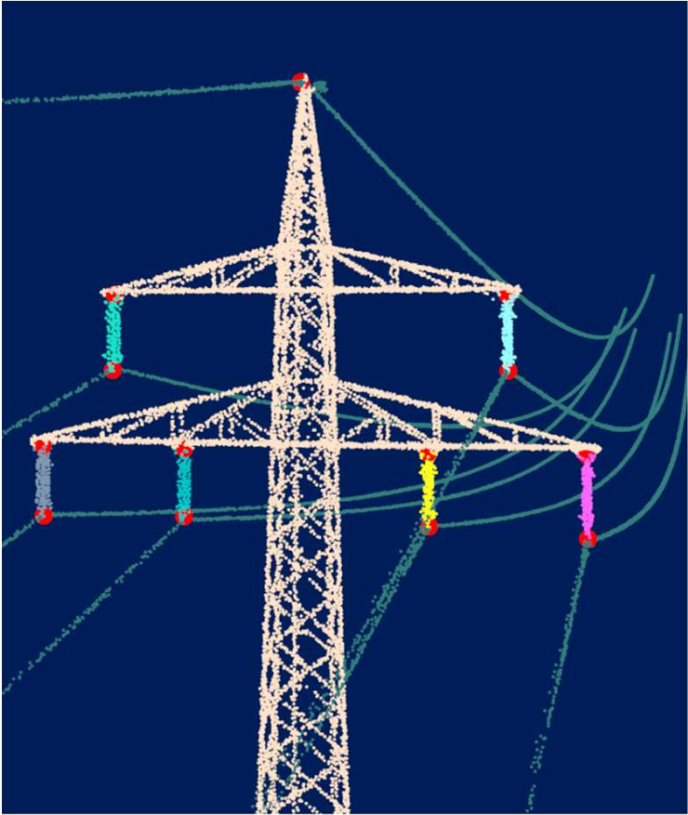
- Use trained model to classify unknown data (input: x,y,z coordinates)
- Result: Probability for each class



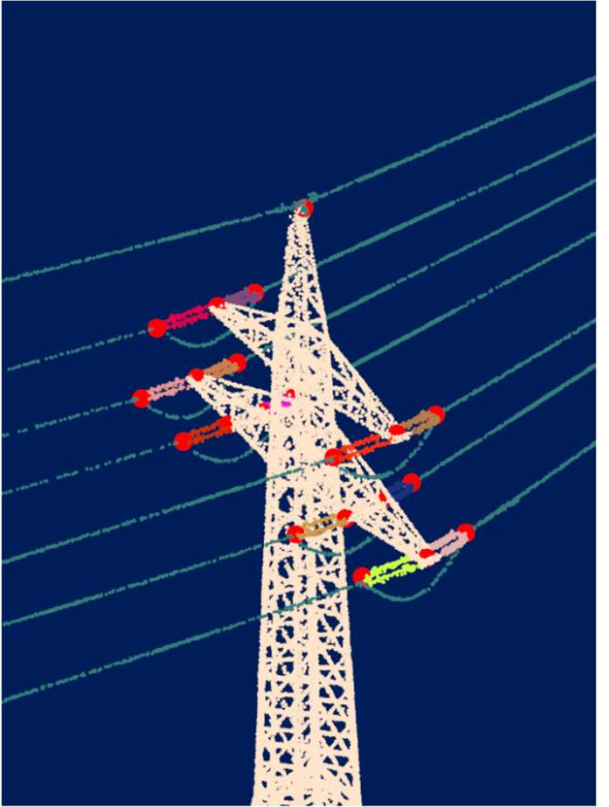
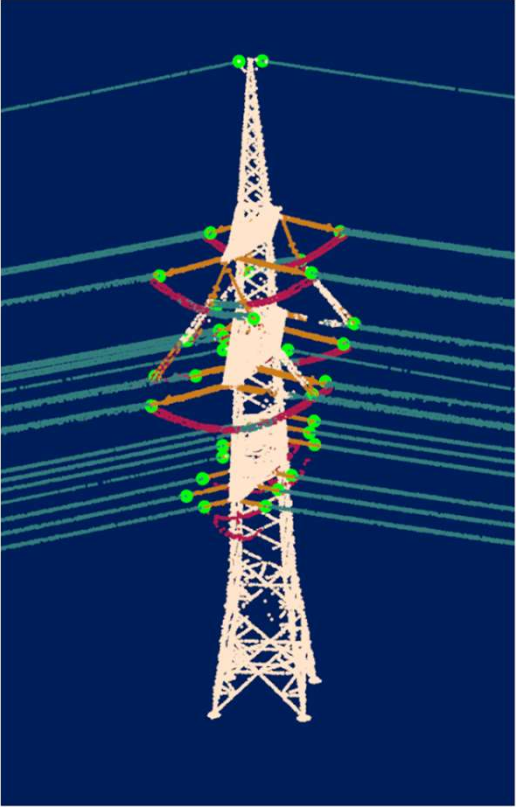
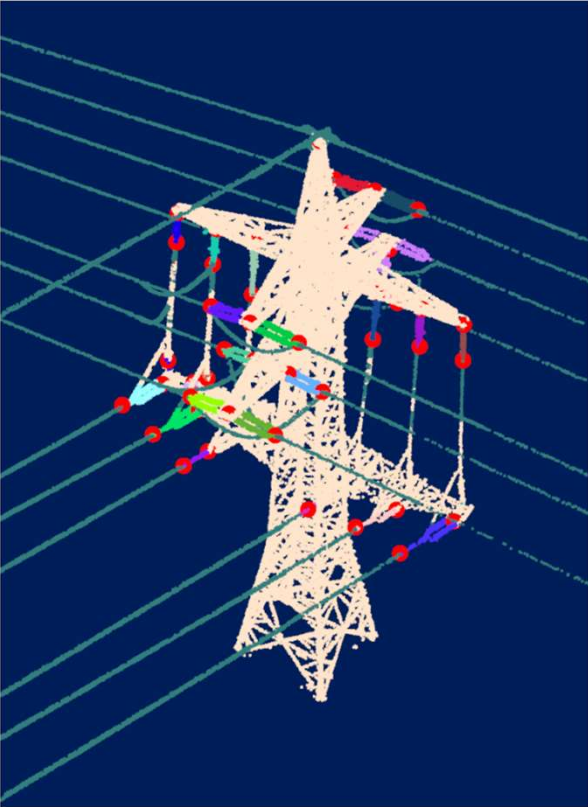


Results

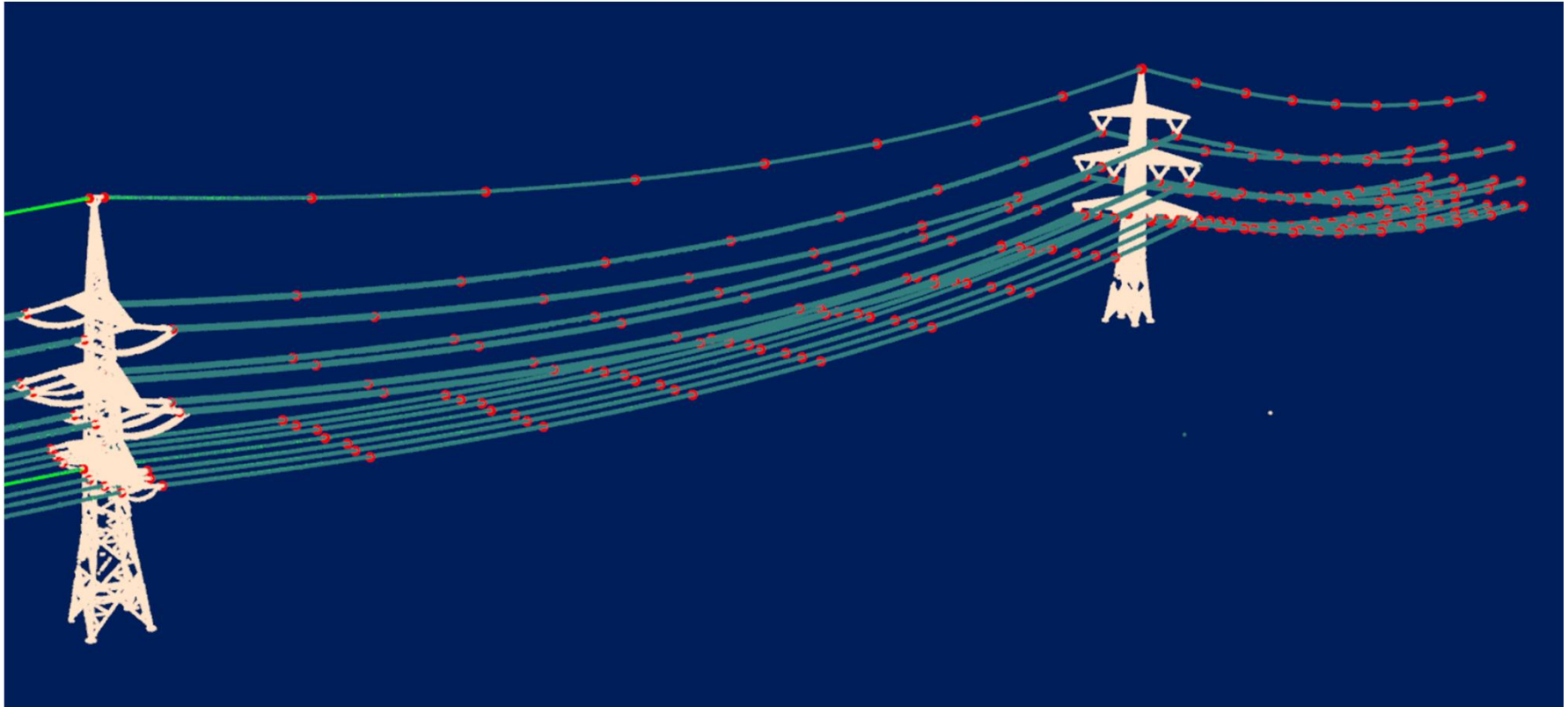
Results



Results



Outlook - Vectorization



Outlook - Vectorization

