

Master's Thesis

# Machine Learning Algorithms for High Accuracy Estimation of Target Distances and Surface Reflectivity using LiDAR

1. Initially use an existing simulation(C++ with Python interface), making adaptations to it if necessary, to train on randomized data
2. Check feasibility of estimations with various ML approaches, compare performance to existing approach
3. Make recordings of real measurements
4. Compare measurements to simulation, and results of real and simulated data of your and the existing approach
5. Train on recorded data (only? or additionally?) and check again
6. Optional: extend estimations to include environmental factors like ambient light and "fogginess" (high backscatter beside actual target)
7. Optional: support multiple target returns

## Contact

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## Advisors

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