$\begin{array}{c} \textbf{Predicting LIDAR Intensity from RGB and Depth} \\ \textbf{Images} \end{array}$

Project Report in computer science

vorgelegt von

Carsten Schmotz

geb. am 23.09.1996 in Dachau

 ${\it angefertigt} \ {\it am}$

Department Informatik Lehrstuhl Graphische Datenverarbeitung Friedrich-Alexander-Universität Erlangen-Nürnberg

Betreuer: Richard Marcus

Betreuender Hochschullehrer: Prof. Dr. Marc Stamminger

Beginn der Arbeit: 22.07.2024

Abgabe der Arbeit: 29.07.2024

Contents

1	\mathbf{Intr}	oduction													
		Motivation													
	1.2	Contribution													
	1.3	Related Work													
2	Prep	parations													
3	Predicting LIDAR Intensity from RGB and Depth Images														
		Setup													
		Implementation													
	3.3	Results													
4	Conclusion														
	4.1	Appendix													
	4.2	References													

Abstract

This project will use rgb images and depth maps to predict lidar intensities. The neural network pix2pix will be used to train and evaluted on the kitti dataset.

Introduction

1.1 Motivation

the sensor simulation project focuses on different apporaches with the lidar images on the kitti dataset. In this work the

1.2 Contribution

The use of the depth as additional input is a new way of improvement for the lidar intesity prediction.

1.3 Related Work

bpnet depth anything v1 2 and metric change pix2pix to 4 dim input

Preparations

used google colab, pix2pix network getting the right input, pix2pix problems



Figure 2.1: caption.

Predicting LIDAR Intensity from RGB and Depth Images

3.1 Setup

used the bp net it is for depth completion and depth prediction

- 3.2 Implementation
- 3.3 Results

Conclusion

- 4.1 Appendix
- 4.2 References

List of Figures

2.1	caption.																																								Þ
		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	و