

# Oliver Lemke

M.Sc. Computer Science | ETH Zurich

Fastlane Scholar | BMW Group



## About me

Highly motivated, and dedicated graduate student. I focus on Machine Intelligence and Computer Vision, with special emphasis on 3D Vision and Autonomous Cars. Excellent organization, communication, and coordination skills acquired through a variety of extra-curricular activities and volunteering experience. Able to effectively self-manage during independent projects.

## Details

2000-02-05  
 lemke.oliver@icloud.com  
 Munich, Germany  
 Oliver Lemke  
 oliver-lemke.github.io/

## Languages

German - Native Language  
 English - C2 Proficiency

## WORK EXPERIENCE

09/23-03/24



**Research Assistant**  
**ETH Zurich**

Zurich, Switzerland

Research assistant in the *Computer Vision and Geometry Group* working on modern machine perception models and robotics. Supervised by Francis Engelmann, Hermann Blum, and Marc Pollefeys. Resulted in the publication of *Spot-Compose*.

10/22-Now



**Scholarship Holder (Fastlane)**  
**BMW Group**

Munich, Germany

Gained practical experience in various departments. Organization of and participation in workshops and talks on technological and professional development.

- 12/22 - 03/23: Intelligent Personal Assistant Group
- 04/24 - 09/24: Perception and Prediction Research Group

## EDUCATION

09/22-Now



**M.Sc. Computer Science**  
**ETH Zurich**

Zurich, Switzerland

**Major:** Machine Intelligence

**Current Grade:** 5.7, top 10% of students

**Excerpt of classes:** Computer Vision, 3D Vision, Machine Perception, CV for Autonomous Cars, Deep Learning

09/19-08/22



**B.Sc. Computer Science**  
**Technical University of Munich**

Munich, Germany

**Final Grade:** 1.2 (high distinction), top 2% of students

**Focus:** Machine Learning and Computer Vision

**Thesis:** Comparison of Vision-based State Representation Learning Algorithms for Reinforcement Learning of Robotic Reaching Tasks (Grade: 1.0)

## SCIENTIFIC WORK

**Paper**

2024

**Spot-Compose: A Framework for Open-Vocabulary Object Retrieval and Drawer Manipulation in Point Clouds.**

Oliver Lemke, Zuria Bauer, René Zurbrügg, Marc Pollefeys, Francis Engelmann, Hermann Blum. *ICRA 2024 Workshops*.

**Best Paper Award**

also demo'd at 3DV Conference (2024) in Davos, Switzerland

**Paper**

2024

**Entropy Aware Message Passing in Graph Neural Networks.** Philipp Nazari\*, Oliver Lemke\*, Davide Guidobene\*, Artiom Gesp\*. *arXiv preprint arXiv:2403.04636*

**Bachelor Thesis**

2022

**Comparison of Vision-based State Representation Learning Algorithms for Reinforcement Learning of Robotic Reaching Tasks.** Oliver Lemke, Josip Josifovski, Alois Knoll

**Seminar Paper**

2022

**Survey on Machine Learning-based Autoscaling in Cloud Computing Environments.** Oliver Lemke, Sayantini Majumdar. *Proceedings of the Seminar Innovative Internet Technologies and Mobile Communications (IITM)*

Soft Skills and Strengths

Analytical Thinking

Highly Organized

Efficient

Hard Working

Excellent Communication Skills

Disciplined

Dependable

Reliable

Other Interests

- Gym 🏋️

• Reading 📖

• Volleyball 🏐

• Hiking 🧭

• PC Building 🛠️

HONORS AND AWARDS

best.in.tum	best.in.tum is a special program by the TUM Department of Informatics that promotes the <b>top 2%</b> of all Informatics students based on academic results. It is designed to confront the best students with open and especially difficult issues in Informatics, while opening up opportunities for discussion and research.
Best Paper Award	Awarded for the paper "Spot-Compose: A Framework for Open-Vocabulary Object Retrieval and Drawer Manipulation in Point Clouds" in the Mobile Manipulation Workshop at ICRA.

EXTRA-CURRICULAR ACTIVITIES

2022	<b>Summer School</b> 📍 Sarntal, Italy <b>Technical University of Munich</b> <b>Topic:</b> Deep Learning in Image and Video Processing Summer School for the introduction of particularly motivated and gifted students to advanced fields of research. Worked on autonomously steering a toy car with video input.
09/15-06/18	<b>Max Born Academy</b> 📍 Germering, Germany <b>Max-Born-Gymnasium Germering</b> Extra-curricular lectures, workshops, and excursions in a variety of technical, societal, and cultural fields of study for the development of particularly gifted students.

Other Activities

09/18-07/19	<b>Work and Travel</b> 📍 New Zealand <b>Various Companies</b> Lived, worked, and travelled in New Zealand for 9 months with a Work-and-Travel visa. A trip, which I undertook and financed alone, by working as a receptionist, farm hand, or waiter (among other jobs).
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PROFESSIONAL SKILLS

Machine Learning	<b>Python:</b> Expert <b>PyTorch:</b> Expert <b>NumPy:</b> Advanced <b>Pandas, OpenAI Gym, Stable-Baselines, Ray:</b> Intermediate
Data Management	<b>SQL :</b> Advanced <b>PySpark:</b> Intermediate

REFERENCES

Francis Engelmann	<b>Supervisor &amp; Co-Author Spot-Compose</b> Postdoctoral Researcher, ETH Zurich, Google ✉️ francis.engelmann@ai.ethz.ch
Hermann Blum	<b>Supervisor &amp; Co-Author Spot-Compose</b> Junior Professor, Lamarr Institute / University of Bonn <i>Formerly: Postdoctoral Researcher, ETH Zurich</i> ✉️ hermann.blum@inf.ethz.ch
Josip Josifovski	<b>Bachelor Thesis Advisor</b> PhD Candidate, Technical University of Munich ✉️ josip.josifovski@tum.de