

# Marius Memmel

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## EDUCATION

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<b>University of Washington (UW)</b> <i>PhD Student in Computer Science &amp; Engineering, GPA: 4.00/4.00, in progress</i> <b>Advisors:</b> Prof. Dieter Fox, Prof. Abhishek Gupta	Seattle, US <i>Sept. 2022 – Present</i>
<b>Technical University of Darmstadt (TU Darmstadt)</b> <i>Master of Science, Grade 1.1 (scale 1-6, 1 best), GPA: 3.94/4.00, Top 6.93%</i> <b>Major:</b> Computer Science, <i>Minor:</i> Entrepreneurship & Innovation	Darmstadt, DE <i>Oct. 2019 – Sept. 2022</i>
<b>Swiss Federal Institute of Technology Lausanne (EPFL)</b> <i>Swiss-European Mobility Programme / Exchange Program, Master Thesis</i>	Lausanne, CH <i>Sept. 2021 – May 2022</i>
<b>Appalachian State University</b> <i>Exchange Program, GPA: 4.0/4.0</i>	Boone, US <i>Aug. 2018 – Dec. 2018</i>
<b>Baden-Württemberg Cooperative State University (DHBW)</b> <i>Bachelor of Science, Final Grade 1.4 (scale 1-6, 1 best), GPA: 3.97/4.00, Rank 1</i> <b>Major:</b> Business Information Systems, <i>Concentration:</i> Software Engineering	Mannheim, DE <i>Aug. 2016 – Sept. 2019</i>

## PUBLICATIONS

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- [1] Chen Z., Walsman A., **Mammel M.**, Mo K., Fang A., Fox D.\*, Gupta A.\* "URDFormer: A Pipeline for Constructing Articulated Simulation Environments from Real-World Images", *Robotics: Science and Systems* (RSS), 2024 [paper]
- [2] Khazatsky K., Pertsch K., Nair S., ..., **Mammel M.**, ..., Kollar T., Levine S., Finn C. "DROID: A Large-Scale In-The-Wild Robot Manipulation Dataset", *Robotics: Science and Systems* (RSS), 2024 [paper]
- [3] **Mammel M.**, Wagenmaker A., Zhu C., Fox D., and Gupta A. "ASID: Active Exploration for System Identification and Reconstruction in Robotic Manipulation", *International Conference on Learning Representations* (ICLR) (oral, top 1.2%), 2024 [paper]
- [4] **Mammel M.**, Bachmann R., and Zamir A., "Modality-invariant Visual Odometry for Embodied Vision", *Conference on Computer Vision and Pattern Recognition* (CVPR), 2023 [paper] [arxiv] [code]
- [5] Stammer W., **Mammel M.**, Schramowski P., and Kersting K., "Interactive Disentanglement: Learning Concepts by Interacting with their Prototype Representations", *Conference on Computer Vision and Pattern Recognition* (CVPR), 2022 [paper] [arxiv] [code]
- [6] **Mammel M.**, Liu P., Tateo D., and Peters J., "Dimensionality Reduction and Prioritized Exploration for Policy Search", *Artificial Intelligence and Statistics* (AISTATS), 2022 [paper] [arxiv] [code]

## WORKSHOP & RESEARCH PROJECTS

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- [1] **Mammel M.**, Gonzalez C., and Mukhopadhyay A., "Adversarial Continual Learning for Multi-Domain Hippocampal Segmentation", in *Domain Adaptation and Representation Transfer* (DART) Workshop at *Medical Image Computing and Computer Assisted Intervention* (MICCAI), 2021 [paper] [arxiv] [code]
- [2] **Mammel M.\***, Reich C.\*, Wagner N.\*, and Saeedan F., "Scalable 3D Semantic Segmentation for Gun Detection in CT Scans" (\*equal contribution), *arXiv preprint* 2020 [arxiv] [code]

## THESES

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**Master Thesis:** "Multi-modal Vision Transformers For Data-Efficient Visual Odometry In Embodied Indoor Navigation", Supervisor: Prof. Amir Zamir and Prof. Stefan Roth, TU Darmstadt, 2022 [thesis]

**Bachelor Thesis:** "Conception and Development of a Machine Learning Model for the Analysis of the Energy Consumption of a Plasterboard Dryer", Supervisors: Prof. Julian Reichwald and Halgurt Bapierre, DHBW, 2019 [thesis]

## WORK & RESEARCH EXPERIENCE

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### Graduate Research Assistant

*Paul G. Allen School of Computer Science & Engineering*

Seattle, US

*Sept. 2022 – Present*

- Real world fine-tuning of learned robot policies through simulator adaptation

### Student Research Assistant

*Artificial Intelligence and Machine Learning Lab, TU Darmstadt*

Darmstadt, DE

*Nov. 2020 – Aug. 2021*

- Interactive concept learning and disentanglement
- Weakly-supervised concept learning via a novel concept swapping algorithm and user interaction

### Student Research Assistant

*Medical & Environmental Computing Lab, TU Darmstadt*

Darmstadt, DE

*Oct. 2020 – March 2021*

- Adversarial networks for multi-domain hippocampal segmentation
- Continual learning for domain-invariant segmentation

### Machine Learning Engineer (part-time)

*Sopra Steria Group SA*

Frankfurt, DE

*Jan. 2020 – Dec. 2020*

- Liquidity forecasting with LSTMs
- Development and deployment of machine learning pipelines with Kubeflow

### Software Engineer (part-time)

*Knauf IT*

Würzburg, DE

*Aug. 2016 – Sept. 2019*

- Full stack development with jQuery, Bootstrap, NodeJS, and MongoDB
- Deployment of a website-testing solution to reduce the testing effort for developers
- Website configuration via CMS to improve user experience

## AWARDS & SCHOLARSHIPS

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### European Informatics Student Award

*Award for the brightest European students to facilitate understanding among the nations*

*2022*

### Deutschlandstipendium

*Merit-based scholarship given to less than 1% of all students in Germany*

*2019 – 2020*

### Best Graduate

*Award for the best graduate of Business Information Systems (Software Engineering) at DHBW*

*2019*

### Baden-Württemberg-Stipendium

*Scholarship given to 1500 high-achieving students/year to promote exchange*

*2018*

## VOLUNTEERING

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### Volunteer Firefighter

*Freiwillige Feuerwehr Ettleben e.V.*

Schweinfurt, DE

*June 2010 – Sept. 2022*

### Team Confidant

*Darmstadt Athenas e.V.*

Darmstadt, DE

*May 2021 – Oct. 2021*

### Social Welfare Officer

*Darmstadt Athenas e.V.*

Darmstadt, DE

*Apr. 2020 – May 2021*

### Head Organizer Campfire Cup

*Broombreakers Quidditch Club*

Würzburg, DE

*June 2018 – June 2020*

### Au Pair / English Teacher

*LoPair Education*

Beijing, CN

*Nov. 2015 – May 2016*