Marius Memmel

EDUCATION

University of Washington (UW) Seattle, US PhD Student in Computer Science & Engineering, GPA: 3.81/4.00, in progress Sept. 2022 - Present Advisors: Prof. Dieter Fox, Prof. Abhishek Gupta Technical University of Darmstadt (TU Darmstadt) Darmstadt, DE Master of Science, Grade 1.1 (scale 1-6, 1 best), GPA: 3.94/4.00, Top 6.93% Oct. 2019 - Sept. 2022 Major: Computer Science, Minor: Entrepreneurship & Innovation Swiss Federal Institute of Technology Lausanne (EPFL) Lausanne, CH Swiss-European Mobility Programme / Exchange Program, Master Thesis Sept. 2021 - May 2022 Appalachian State University Boone, US Exchange Program, GPA: 4.0/4.0 Aug. 2018 - Dec. 2018 Baden-Württemberg Cooperative State University (DHBW) Mannheim, DE Aug. 2016 - Sept. 2019 Bachelor of Science, Final Grade 1.4 (scale 1-6, 1 best), GPA: 3.97/4.00, Rank 1

PUBLICATIONS

- [1] Chen Z., Walsman A., **Memmel 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., ..., **Memmel M.**, ..., Kollar T., Levine S., Finn C. "DROID: A Large-Scale In-The-Wild Robot Manipulation Dataset", *Robotics: Science and Systems* (RSS), 2024 [paper]

Major: Business Information Systems, Concentration: Software Engineering

- [3] Memmel 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] **Memmel 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., **Memmel 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] **Memmel 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

- [1] **Memmel 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] **Memmel 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]

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

| Graduate Research Assistant | Seattle, US |
|---|--------------------------|
| Paul G. Allen School of Computer Science & Engineering | $Sept.\ 2022-Present$ |
| Robot Learning Research Intern | Pittsburgh, US |
| $Bosch\ USA$ | June 2024 – Sept. 2024 |
| • Supervised by Jonathan Francis and Bingqing Chen | |
| Student Research Assistant | Darmstadt, DE |
| Artificial Intelligence and Machine Learning Lab, TU Darmstadt | $Nov.\ 2020-Aug.\ 2021$ |
| • Supervised by Prof. Kristian Kersting and Wolfgang Stammer | |
| Student Research Assistant | Darmstadt, DE |
| $Medical\ \mathcal{E}\ Environmental\ Computing\ Lab,\ TU\ Darmstadt$ | Oct. 2020 - March 2021 |
| • Supervised by Anirban Mukhopadhyay and Camila Gonzalez | |
| Machine Learning Engineer (part-time) | Frankfurt, DE |
| Sopra Steria Group SA | Jan.2020-Dec.2020 |
| Software Engineer (part-time) | Würzburg, DE |
| Knauf IT | $Aug.\ 2016-Sept.\ 2019$ |
| AWARDS & COHOLARSHIPS | |

AWARDS & SCHOLARSHIPS

| European In | formatics | 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

| Volunteer Firefighter | Schweinfurt, DE |
|-------------------------------------|--------------------------|
| Freiwillige Feuerwehr Ettleben e.V. | $June\ 2010-Sept.\ 2022$ |
| Team Confidant | Darmstadt, DE |
| Darmstadt Athenas e.V. | $May\ 2021-Oct.\ 2021$ |
| Social Welfare Officer | Darmstadt, DE |
| Darmstadt Athenas e.V. | $Apr.\ 2020-May\ 2021$ |
| Head Organizer Campfire Cup | Würzburg, DE |
| Broombreakers Quidditch Club | $June\ 2018-June\ 2020$ |
| Au Pair / English Teacher | Beijing, CN |
| LoPair Education | $Nov.\ 2015-May\ 2016$ |