Marius Memmel

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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
Bachelor of Science, Final Grade 1.4 (scale 1-6, 1 best), GPA: 3.97/4.00, Rank 1 — *Aug. 2016 – Sept. 2019*
Major: Business Information Systems, *Concentration:* Software Engineering

Publications

[12] **Memmel M.***, Zhang J.*, Kim K., Fox D., Thomason J., Ramos F., Gupta A.†, Li A.† "PEEK: Guiding and Minimal Image Representations for Zero-Shot Generalization of Robot Manipulation Policies", *pre-print*, 2025 [paper]

[11] Yan G., Zhu J.*, Deng Y.*, Yang S., Qiu R., Cheng X., **Memmel M.**, Kirshna R.†, Goyal A.†, Wang X.†, Fox D.† "ManiFlow: A General Robot Manipulation Policy via Consistency Flow Training", *Conference on Robot Learning* (CoRL), 2025 [paper]

[10] Park C.*, Fisher Jillian*, **Memmel M.**, Khullar D., Yun S., Gupta A., Choi Y. "Making VLMs More Robot-Friendly: Self-Critical Distillation of Low-Level Procedural Reasoning", *Empirical Methods in Natural Language Processing* (EMNLP), 2025 [paper]

[9] **Memmel M.***, Berg K.*, Chen B., Gupta A.†, Francis J.† "STRAP: Robot Sub-Trajectory Retrieval for Augmented Policy Learning", *Conference on Learning Representations* (ICLR), 2025 [paper]

[8] Li Yi.*, Deng Y.*, Zhang J.*, Jang J., **Memmel M.**, Garrett C., Ramos R., Fox D., Li A., Gupta A., Goyal A. "HAMSTER: Hierarchical Action Models for Open-World Robot Manipulation", *Conference on Learning Representations* (ICLR), 2025 [paper]

[7] Xia H., Su E., **Memmel M.**, Jain A., Yu R., Mbiziwo-Tiapo N., Farhadi A., Gupta A., Wang S., Ma W. "DRAWER: Digital Reconstruction and Articulation With Environment Realism", *Computer Vision and Pattern Recognition Conference* (CVPR), 2025 [paper]

[6] 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]

[5] 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]

[4] **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]

[3] **Memmel M.**, Bachmann R., and Zamir A., "Modality-invariant Visual Odometry for Embodied Vision", *Conference on Computer Vision and Pattern Recognition* (CVPR), 2023 [paper]

[2] 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]

[1] **Memmel M.**, Liu P., Tateo D., and Peters J., "Dimensionality Reduction and Prioritized Exploration for Policy Search", *Artificial Intelligence and Statistics* (AISTATS), 2022 [paper]

* equal contribution, † equal advising

Theses

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*

Research Intern — Seattle, US
NVIDIA — *Dec. 2024 – Present*

Robot Learning Research Intern — Pittsburgh, US
Bosch USA — *June 2024 – Sept. 2024*

Student Research Assistant — Darmstadt, DE
Artificial Intelligence and Machine Learning Lab, TU Darmstadt — *Nov. 2020 – Aug. 2021*

Student Research Assistant — Darmstadt, DE
Medical & Environmental Computing Lab, TU Darmstadt — *Oct. 2020 – March 2021*

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 & Scholarships

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*