Marius Memmel

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EDUCATION

University of Washington (UW)	Seattle, US
PhD Student in Computer Science & Engineering, GPA: 4.00/4.00, 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

[1] **Memmel M.**, Wagenmaker A., Zhu C., Fox D., and Gupta A. "ASID: Active Exploration for System Identification and Reconstruction in Robotic Manipulation", *Under submission*, 2023 [paper]

[2] **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]

[3] 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]

[4] **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], Chen Q., **Memmel M.**, Fang A., Walsman A., Fox D., Gupta A. "URDFormer: Constructing interactive Realistic Scenes from Real Images via Simulation and Generative Modeling", *Towards Generalist Robots: Learning Paradigms for Scalable Skill Acquisition@ CoRL2023*, 2023 [paper]

[2] **Memmel M.**, and Zamir A., "Modality-invariant Visual Odometry for Indoor Navigation", Embodied AI Workshop at *Conference on Computer Vision and Pattern Recognition* (CVPR), 2023 [paper] [code]

[3] **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]

[4] **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]

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

Student Research Assistant   Darmstadt, DE
Artificial Intelligence and Machine Learning Lab, TU Darmstadt   *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   Darmstadt, DE
Medical & Environmental Computing Lab, TU Darmstadt   *Oct. 2020 – March 2021*
  - Adversarial networks for multi-domain hippocampal segmentation
  - Continual learning for domain-invariant segmentation

Machine Learning Engineer (part-time)   Frankfurt, DE
Sopra Steria Group SA   *Jan. 2020 – Dec. 2020*
  - Liquidity forecasting with LSTMs
  - Development and deployment of machine learning pipelines with Kubeflow

Software Engineer (part-time)   Würzburg, DE
Knauf IT   *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

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*

Skills

Languages: (native) German; (fluent) English; (basics) Chinese
Programming Languages: (proficient) Python, LaTeX; (familiar) HTML/JavaScript, Java
Libraries: (proficient) PyTorch, NumPy, Scikit-Learn, polymetis
Operating Systems: (proficient) Ubuntu, MacOS, Windows
Tools: (proficient) Docker, VSCode

Volunteering

Volunteer Firefighter   Schweinfurt, DE
Freiwillige Feuerwehr Ettleben e.V.   *June 2010 – Present*

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*