Marius Memmel

✉ memmelma@cs.washington.edu | 🌐 memmelma.github.io
🐙 memmelma | in Marius Memmel | 🐦 @memmelma

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

[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] [arxiv] [code]

[3] **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.**, 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]

[2] **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]

[3] **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
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

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

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