SHERWIN BAHMANI

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EDUCATION

M.Sc. Computational Engineering, Technical University of Darmstadt — Apr 2018 - Sep 2021

- Graduated with honors
- Focus: Computer Vision and Machine Learning

B.Sc. Mechanical and Process Engineering, Technical University of Darmstadt — Oct 2014 - Apr 2018

- Focus: Mechatronics

WORK EXPERIENCE

Research Intern: ETH Zurich — Jan 2022 - Jun 2022

- Computer Vision Lab: Research in the field of 3D-aware and controllable video synthesis
- Advisors: Ph.D. Hao Tang, Prof. Radu Timofte, Prof. Luc Van Gool

Research Intern: École Polytechnique Fédérale de Lausanne (EPFL) — Oct 2021 - Nov 2021

- Visual Intelligence for Transportation Lab: Causal motion forecasting for out-of-distribution robustness
- Advisors: M.Sc. Yuejiang Liu, Prof. Alexandre Alahi

Student Research Assistant: Technical University of Darmstadt — Apr 2021 - Oct 2021

- Visual Inference Lab: Research in the field of video frame interpolation and optical flow estimation
- Advisors: Ph.D. Simone Schaub-Meyer, Prof. Stefan Roth

Master Thesis: Mercedes-Benz AG / Technical University of Darmstadt — Sep 2020 - Mar 2021

- Image Understanding Group: Multi-scale value iteration networks for panoptic segmentation
- Advisors: M.Sc. Jonas Uhrig, Ph.D. Marius Cordts, Prof. Stefan Roth

Working Student: Mercedes-Benz AG — Mar 2020 - Sep 2020

- Image Understanding Group: Research in the field of instance and panoptic segmentation
- Advisors: M.Sc. Jonas Uhrig, Ph.D. Uwe Franke

Internship: Daimler AG — Aug 2019 - Feb 2020

- Electric Powertrain Development: Software engineering for automated hybrid powertrain designs

Bachelor Thesis: Fraunhofer LBF — Nov 2017 - Apr 2018

- Reliability of Electric Vehicles: Research in battery aging forecasting using nonlinear regression

Internship: Dr. Ing. h.c. F. Porsche AG — Apr 2017 - Sep 2017

- Digital Powertrain Development: Software engineering for damage calculation in electric powertrains

UNIVERSITY PROJECTS

Project Deep Learning for Computer Vision: Visual Inference Lab
Research in the field of domain generalization for semantic segmentation (Advisors: M.Sc. Nikita Araslanov, Prof. Stefan Roth)

Deep Learning for Medical Imaging: Interactive Graphics Systems Group
Development of a tool for semantic segmentation of skin cancer (Advisor: Ph.D. Anirban Mukhopadhyay)

Deep Learning Architectures and Methods: Artificial Intelligence and Machine Learning Lab
Deep Learning for super-resolution of audio data (Advisors: M.Sc. Patrick Schramowski, Prof. Kristian Kersting)

Deep Learning for Natural Language Processing: Ubiquitous Knowledge Processing Lab
Ranking of clarifying questions for conversational agents using BERT (Advisors: Ph.D. Ivan Habernal, Ph.D. Mohsen Mesgar)

Deep Generative Models: Interactive Graphics Systems Group
Learning a generative model from a single natural image using SinGAN (Advisor: Ph.D. Anirban Mukhopadhyay)

Machine Learning for Automated Driving: Institute for Automotive Engineering
Automated scenario generation from environment perception sensors (Advisors: Ph.D. Martin Holder, Prof. Hermann Winner)

Multi-objective Optimization: Institute for Mechatronic Systems
Development of an automated and optimized design of a shift actuator (Advisor: Prof. Stephan Rinderknecht)

PUBLICATIONS / PREPRINTS

[1] Y. Liu, R. Cadei*, J. Schweizer*, S. Bahmani, and A. Alahi, "Towards robust and adaptive motion forecasting: A causal representation perspective", in *CVPR*, 2022.

[2] S. Bahmani*, O. Hahn*, E. Zamfir*, N. Araslanov, D. Cremers, and S. Roth, "Out-of-domain semantic segmentation by self-adaptation to a single image", in *Under Review*, 2022.