

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
 - Advisor: Prof. Stefan Roth
- B.Sc. Mechanical and Process Engineering**, Technical University of Darmstadt Oct 2014 - Apr 2018
- Focus: Mechatronics

RESEARCH EXPERIENCE

- Research Intern: Simon Fraser University** Dec 2022 - Apr 2023
- GrUVi Lab: Neural fields for 3D vision
 - Advisor: Prof. Andrea Tagliasacchi
- Research Intern: Stanford University** Jul 2022 - Nov 2022
- Geometric Computation Group: Compositional and controllable generation of 3D scenes
 - Advisors: Dr. Jeong Joon Park, Dr. Despoina Paschalidou, Prof. Gordon Wetzstein, Prof. Leonidas Guibas
 - Collaborator: Prof. Andrea Tagliasacchi
- Research Intern: ETH Zurich** Jan 2022 - Jun 2022
- Computer Vision Lab: 3D-aware and controllable video synthesis
 - Advisors: Dr. Hao Tang, Prof. Radu Timofte, Prof. Luc Van Gool
 - Collaborators: Dr. Jeong Joon Park, Dr. Despoina Paschalidou, Prof. Gordon Wetzstein, Prof. Leonidas Guibas
- 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: Yuejiang Liu, Prof. Alexandre Alahi
- Student Research Assistant: Technical University of Darmstadt** Apr 2021 - Oct 2021
- Visual Inference Lab: Video frame interpolation and optical flow estimation
 - Advisors: Dr. 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: Jonas Uhrig, Dr. Marius Cordts, Prof. Stefan Roth
- Working Student: Mercedes-Benz AG** Mar 2020 - Sep 2020
- Image Understanding Group: Instance and panoptic segmentation
 - Advisors: Jonas Uhrig, Dr. Uwe Franke
- Bachelor Thesis: Fraunhofer LBF** Nov 2017 - Apr 2018
- Reliability of Electric Vehicles: Battery aging forecasting using nonlinear regression
 - Advisors: Alexander Dautfest, Prof. Tobias Melz

WORK EXPERIENCE

- Intern: Daimler AG** Aug 2019 - Feb 2020
- Electric Powertrain Development: Software engineering for automated hybrid powertrain designs
- Intern: Dr. Ing. h.c. F. Porsche AG** Apr 2017 - Sep 2017
- Digital Powertrain Development: Software engineering for damage calculation in electric powertrains

PUBLICATIONS / PREPRINTS

- [1] **S. Bahmani**, J. J. Park, D. Paschalidou, H. Tang, G. Wetzstein, L. Guibas, L. Van Gool, and R. Timofte, “3d-aware video generation”, *arXiv*, 2022.
- [2] **S. Bahmani***, O. Hahn*, E. Zamfir*, N. Araslanov, D. Cremers, and S. Roth, “Semantic self-adaptation: Enhancing generalization with a single sample”, *ECCVW*, 2022.
- [3] Y. Liu, R. Cadei*, J. Schweizer*, **S. Bahmani**, and A. Alahi, “Towards robust and adaptive motion forecasting: A causal representation perspective”, *CVPR*, 2022.

UNIVERSITY PROJECTS

Project Deep Learning for Computer Vision: Visual Inference Lab

Domain generalization for semantic segmentation (Advisors: Dr. Nikita Araslanov, Prof. Stefan Roth)

Deep Learning for Medical Imaging: Interactive Graphics Systems Group

Semantic segmentation of skin cancer (Advisor: Dr. Anirban Mukhopadhyay)

Deep Learning for Natural Language Processing: Ubiquitous Knowledge Processing Lab

Ranking clarifying questions for conversational agents using BERT (Advisors: Dr. Ivan Habernal, Dr. Mohsen Mesgar)

Deep Generative Models: Interactive Graphics Systems Group

Learning a generative model from a single natural image using SinGAN (Advisor: Dr. Anirban Mukhopadhyay)

Machine Learning for Automated Driving: Institute for Automotive Engineering

Automated scenario generation from environment perception sensors (Advisor: Prof. Hermann Winner)

Multi-objective Optimization: Institute for Mechatronic Systems

Automated and optimized designs of shift actuators (Advisor: Prof. Stephan Rinderknecht)

ACADEMIC SERVICE

Reviewer: ECCV 2022, CVPR 2023