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## Education

- 07/19 – today **Ph.D.**,  
*Bosch Center for Artificial Intelligence & Institute of Neural Information Processing, Ulm University, Renningen, Germany*  
Research of efficient and robust state-of-the-art methods for dense visual feature learning for robotic manipulation.
- 10/14 – 08/15 **M.Sc. in Electrical Engineering and Information Technology**,  
10/16 – 04/18 *TU München, Munich, Germany*,  
GPA: 1.3 (on a scale from 1 to 5, with 1 being the highest score)
- Master's Thesis** Title: "A Simple But Universal Factorization Model for Knowledge Graph Completion".
- 02/15 – 07/17 **Honours Degree in Technology Management**,  
*Center for Digital Technology and Management, Munich, Germany*,  
GPA: 1.3 (on a scale from 1 to 5, with 1 being the highest score)  
Add-on study program, with a focus on trend research and ideation of business ideas, new product development and prototyping, and consulting on strategic endeavors. 25 students selected per semester (<8% acceptance rate).
- 10/10 – 11/13 **B.Sc. in Electrical Engineering and Information Technology**,  
*TU München, Munich, Germany*,  
GPA: 1.9 (on a scale from 1 to 5, with 1 being the highest score)
- Bachelor's Thesis** Title: "Development of a Depth-Augmented Dynamic Vision Sensor for 3D SLAM". Co-authored 2014 ICRA paper.

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## Work and Research Experience (selection, most recent)

- 08/23 – today **Research Scientist**, *Bosch GmbH, Renningen, Germany*  
Research and development of perception systems for mobile robots.
- 08/18 – 06/19 **Software Engineer for Computer Vision**, *NavVis GmbH, Munich, Germany*  
Implementation of a parallelized TSDF-based surface reconstruction and evaluation framework. Conduct of product research through customer and expert interviews. (part-time)
- 11/17 – 04/18 **Master's Thesis Student**, *Mercateo GmbH, Munich, Germany*  
Research of a novel model for representation learning of knowledge graphs.
- 03/17 – 08/17 **Robotist Freelancer**, *Robotise, Munich, Germany*  
Consulting, perception algorithm development, managing code integration and continuous testing, managing ROS package release process.
- 01/16 – 08/16 **Research Intern**, *NTT Communication Science Laboratories, Honatsugi, Japan*  
Research on cross-modal feature learning from human-curated content graphs. Co-authored 2018 AAAI paper.
- 10/14 – 07/15 **Research Assistant**, *NavVis GmbH, Munich, Germany*  
Development of algorithm for the removal of point clouds artifacts using SLAM.
- 01/14 – 06/14 **Research Intern**, *Siemens AG, Siemens Corporate Research, Princeton, USA*  
Implementation of 3D reconstruction workflow (feature-based graph-SLAM) with out-of-core bundle adjustment; Implementation and evaluation of depth camera calibration techniques; Porting and refactoring of Fortran/F2C code to C++.
- 10/13 – 12/13 **Research Assistant**, *TU München, Neuroscientific System Theory, Munich, Germany*  
Extension of an event-based SLAM framework to work in real-time on embedded, low-power ARM hardware (e.g., Rockchip devices), streaming of data via UDP, and visualization on a client device.

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## Publications

- [1] Christian Graf, David B. Adrian, Joshua Weil, Miroslav Gabriel, Philipp Schillinger, Markus Spies, Heiko Neumann, and Andras Gabor Kupcsik. "Learning Dense Visual Descriptors using Image Augmentations for Robot Manipulation Tasks". In: *Proceedings of The 6th Conference on Robot Learning*. Ed. by Karen Liu, Dana Kulic, and Jeff Ichnowski. Vol. 205. Proceedings of Machine Learning Research. PMLR, Dec. 2023, pp. 871–880.
- [2] David B. Adrian, Andras Gabor Kupcsik, Markus Spies, and Heiko Neumann. "Efficient and Robust Training of Dense Object Nets for Multi-Object Robot Manipulation". In: *2022 International Conference on Robotics and Automation (ICRA)*. 2022, pp. 1562–1568.
- [3] Yusuke Mukuta, Akisato Kimura, David B Adrian, and Zoubin Ghahramani. "Weakly supervised collective feature learning from curated media". In: *The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18)*. 2018.
- [4] Irman Abdic et al. *The Future of Education: Trend Report 2015*. Center for Digital Technology and Management, 2015.
- [5] David Weikersdorfer, David B Adrian, Daniel Cremers, and Jörg Conradt. "Event-based 3D SLAM with a depth-augmented dynamic vision sensor". In: *Robotics and Automation (ICRA), 2014 IEEE International Conference on*. IEEE, 2014, pp. 359–364.

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## Competitions, Awards, and Scholarships (selection)

- 09/17 – 10/17 **1st Place in VW Data:Lab Deep Learning and Robotics Challenge**, Volkswagen AG, Munich  
Team challenge entailed building a fully autonomous Lego brick sorting robot from scratch.
- 06/16 **Abroad Scholarship**, Heinrich und Lotte Mühlfenzl-Stiftung, Munich  
Awarded to students with excellent grades and social engagement at/outside of university.
- 08/15 – 09/16 **Vulcanus in Japan**, EU-Japan Centre for Industrial Cooperation, Japan  
Accepted as 2015-16 fellow (4% acceptance rate, >1000 applicants EU-wide).
- 11/12 – 11/13 **Siemens-Mentoring-Program**, Siemens AG / TU München, Munich  
The one-year program offers a Senior Manager as mentor, fireside chats, and a variety of events (~15 students per year).

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## Leadership activities

- 10/12 – 07/15 **Member**, Federal Agency for Technical Relief (THW), Munich  
Technical relief in Germany as part of national civil protection measures.
- 03/12 – 11/13 **Mentor**, Mentoring for International eXchange Students, TU München  
Mentor and contact person for incoming foreign students of the faculty.
- 01/12 – 01/13 **Member of the board**, Student association of the Department of Electrical Engineering and Information Technology, TU München  
Management of the registered association, including our business branch. Organized the introduction of a new soft-skill program available to all students as part of the regular degree curriculum.
- 03/11 – 07/15 **Student representative**, Department of Electrical Engineering and Information Technology, TU München  
Regular member of the *Studienkommission* (commission on study affairs) and member of the working committee of the master reform.

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## Computer Literacy and Open-Source Contributions

Operating Systems	Linux (x86_64/ARM), Windows	Office	L <sup>A</sup> T <sub>E</sub> X, MS Office, OpenOffice
Programming Languages	C/C++, Python, MATLAB	Libraries	PyTorch/Tensorflow, PCL, OpenCV, ROS
GitHub	github.com/dbadrian		

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## Languages

German	Native	English	Business (C <sub>2</sub> )
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