#### 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.

# Work and Research Experience (selection)

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

Roboticist 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/ $F_2C$  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.

09/11 - 11/11

Intern, Siemens AG, I DT MC MF-M COC LMS LP, Munich

Design and implementation of a test series evaluation tool in MATLAB (>20x speed improvement over existing solution); Implementation of a wrapper library for Siemens Starter in C# and integration with LabVIEW.

#### **Publications**

- [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.

## 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.

o6/16 **Abroad Scholarship**, *Heinrich und Lotte Mühlfenzl-Stiftung*, Munich Awarded to students with excellents 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).

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).

### 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 comitee of the master reform.

# Computer Literacy and Open-Source Contributions

Operating Systems Linux (x86\_64/ARM), Windows Office LATEX, MS Office, OpenOffice

Programming C/C++, Python, MATLAB Libraries PyTorch/Tensorflow, PCL, OpenCV, ROS

GitHub github.com/dbadrian

### Languages

German Native English Business (C2)

Japanese Lower Intermediate (A2-B1)