



# Johann Schmidt

PHD STUDENT · BMBF-FUNDED RESEARCHER

*Otto-von-Guericke University, Universitätsplatz 2, Magdeburg, Germany*

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## Education

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### University of Applied Sciences

*Magdeburg, Germany*

#### BACHELOR IN ELECTRICAL ENGINEERING

*2014 - 2018*

- Grade overall: 1.7
- Grade thesis: 1.2

### Otto-von-Guericke University

*Magdeburg, Germany*

#### MASTER IN DIGITAL ENGINEERING

*2018 - 2020*

- Grade overall: 1.4
- Grade thesis: 1.1

### Otto-von-Guericke University

*Magdeburg, Germany*

#### PHD IN DEEP LEARNING

*2020 - today*

- Primary Advisor: Prof. Dr.-Ing. Sebastian Stober
- Secondary Advisor: Prof. Dr.-Ing. Andreas Nürnberger

## Professional Experience

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2013-2016 **Internship**, TCS AG Genthin

2014 **Internship**, Bachmann GmbH Magdeburg

2015 **Internship**, Enercon GmbH Magdeburg

2017-2018 **Bachelor's Thesis Intern**, Institut for Automation and Communication (ifak) e.V. Magdeburg

2020 **Master's Thesis Intern**, Fraunhofer Institute for Factory Operation and Automation IFF Magdeburg

2020-2022 **Full-time Researcher**, BMBF-funded SENECA R&D project at the OVGU Magdeburg

2022 **Full-time Researcher**, BMBF-funded AI-Engineering education project at the OVGU Magdeburg

2022-today **Full-time Researcher**, BMBF-funded PASCAL R&D project at the OVGU Magdeburg

## Awards

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2022 **2nd Place**, Transatlantic AI Hackaton on Sustainable Supply Chains

2024 **Best Paper Nomination**, Hawaii International Conference on System Sciences (HICSS)

## Publications

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- S. Bexten, **J. Schmidt**, C. Walter, and N. Elkmann. Human Action Recognition as part of a Natural Machine Operation Framework. IEEE International Conference on Emerging Technologies and Factory Automation (ETFA), 2021.
- S. Lang, T. Reggelin, **J. Schmidt**, M. Muller, and A. Nahhas. NeuroEvolution of augmenting topologies for solving a two-stage hybrid flow shop. Expert Systems with Applications, 2021.
- J. Schmidt** and S. Stober. Approaching Scheduling Problems via a Deep Hybrid Greedy Model and Supervised Learning. IFAC Symposium on Information Control Problems in Manufacturing, 2021.
- J. Schmidt** and S. Stober. Learning Continuous Rotation Canonicalization with Radial Beam Sampling. ArXiv, 2023.
- J. Schmidt**, B. Köhler, H. Borstell. Reviving Simulated Annealing: Lifting its Degeneracies for Real-Time Job Scheduling. The Hawaii International Conference on System Sciences (HICSS), 2024.
- J. Perschewski, **J. Schmidt**, S. Stober. Pursuing the Perfect Projection: A Projection Pursuit Framework for Deep Learning. International Workshop on Self-Organizing Maps and Learning Vector Quantization, Clustering and Data Visualization (WSOM+), 2024.
- J. Schmidt** and S. Stober. Tilt your Head: Activating the Hidden Spatial-Invariance of Classifiers. International Conference on Machine Learning (ICML), 2024.

## Certificats

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- 2020 Natural Language Processing with Classification and Vector Spaces (Coursera)
- 2020 Statistical Inference by the Johns Hopkins University (Coursera)
- 2020 Structuring Machine Learning Projects (Coursera)
- 2021 Studierende aktivieren (Kl. + Gr. Gruppen) (Herbstakademie, OVGU)
- 2021 Hybride Lehre: didaktische Gestaltung, Einsatzszenarien (Herbstakademie, OVGU)
- 2021 Einführung 'moodle' in der Rolle 'Lernende/Trainer (Herbstakademie, OVGU)
- 2021 Urheberrecht in der Lehre (Herbstakademie, OVGU)
- 2021 Von analog zu digital: Visualisierungen für die Lehre/Lerneinheiten (Herbstakademie, OVGU)
- 2023 Präsentationsseminar (NaWik)

## Thesis Mentoring

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- 2021-2022 **Kiran Bhavaraju**, Master, OVGU + Dr. Ecklebe GmbH
- 2022-2023 **Sathya Murugan**, Master, OVGU + Trumpf SE Co. KG
- 2022-2023 **Michael Thane**, Bachelor, Ostfalia University + OVGU
- 2022-2023 **Nils Treutheit**, Bachelor, OVGU + Fraunhofer IFF
- 2022-2023 **Jakob Rothert**, Master, OVGU + Fraunhofer IFF
- 2022-2023 **Frank Dreyer**, Master, OVGU + Thorsis Technologies GmbH
- 2022-2023 **Indranil Maji**, Master, OVGU + Thorsis Technologies GmbH
- 2022-2023 **Philipp Grill**, Bachelor, OVGU + Thorsis Technologies GmbH
- 2022-2023 **Max Ksoll**, Bachelor, OVGU + Thorsis Technologies GmbH
- 2022-2023 **Simon Flügel**, Master, OVGU + SaxonQ
- 2022-2023 **Tim Faasch**, Master, OVGU + Fraunhofer IFF
- 2023-2024 **Dominik Lindner**, Bachelor, OVGU
- 2023-2024 **Nestor Weidemann**, Bachelor, OVGU + Volkswagen AG
- 2023-2024 **Veltin Gieseke**, Master, OVGU + Fraunhofer IFF