


Johannes Jakubik

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RELEVANT EXPERIENCE

PhD Candidate

Oct. 2020 – present

KSRI/IISM, Karlsruhe Institute of Technology (KIT)

Karlsruhe, Germany

- Research interests in data-centric AI, few-shot learning, and foundation models
- Instructor of the course *Artificial Intelligence in Service Systems – Applications in Computer Vision*
- Part of a government funded research project on AI for the construction industry (“SDaC”)
- Affiliated research member at *ETH Zurich* until Oct. 2021 (Prof. Stefan Feuerriegel)

Visiting Researcher

Oct. 2020 – ongoing

IBM Research Europe

Rüschlikon, Switzerland

- Geospatial foundation models for climate impact
- Generalized zero-shot semantic segmentation

Machine Learning and Information System Intern

Oct. 2019 – Jan. 2020

Dr. Ing. h.c. F. Porsche AG, Porsche Motorsport

Weissach, Germany

- Image classification for classifying Formula E TV streams
- Speech-to-text application for audio streams of Formula E drivers

EDUCATION

ETH Zurich (ETHZ)

Zurich, Switzerland

Invited Visiting Student

Apr. 2020 – Sep. 2020

Thesis on applied ML and optimization (published in *Production & Operations Management* and *European Journal of Operational Research*)

Karlsruhe Institute of Technology (KIT)

Karlsruhe, Germany

M.Sc. in Industrial Engineering and Management (1.5)

Apr. 2011 – Jul. 2014

Focus: Machine learning, multivariate statistics, stochastic optimization

Instituto Superior Técnico (IST)

Lisbon, Portugal

Erasmus Stay, M.Sc. in Information Systems and Computer Engineering

Oct. 2014 – Mar. 2018

Focus: Information processing and retrieval, Decision support models

Karlsruhe Institute of Technology (KIT)

Karlsruhe, Germany

B.Sc. in Industrial Engineering and Management (1.7)

Oct. 2014 – Mar. 2018

Thesis on reinforcement learning in manufacturing (published in *Production Engineering*)

Gymnasium Kenzingen

Kenzingen, Germany

Abitur (1.2)

June 2014

SELECTED PUBLICATIONS

- [1] **Jakubik, J.**, Muszynski, M., Vössing, M., Kühl, N., & Brunschweiler, T. (2023). Toward Foundation Models for Earth Monitoring: Generalizable Deep Learning Models for Natural Hazard Segmentation. *IGARSS'23*
- [2] **Jakubik, J.** & Feuerriegel, S. (2022). Data-driven allocation of development aid towards Sustainable Development Goals: Evidence from HIV/AIDS. *Production and Operations Management*, 31, 2739– 2756..
- [3] **Jakubik, J.**, Binding, A., & Feuerriegel, S. (2021). Directed particle swarm optimization with Gaussian-process-based function forecasting. *European Journal of Operational Research*, 295(1), 157-169.
- [4] **Jakubik, J.**, Hemmer, P., Vössing, M., Blumenstiel, B., Bartos, A., & Mohr, K. (2022). Designing a Human-in-the-Loop System for Object Detection in Floor Plans. *Proceedings of the AAAI Conference on Artificial Intelligence*
- [5] **Jakubik, J.**, Nazemi, A., Geyer-Schulz, A., & Fabozzi, F. J. (2021). Incorporating financial news for forecasting Bitcoin prices based on long short-term memory networks. *Quantitative Finance*, 1-15.

SELECTED OTHER

Programming: Python, R, SQL

Honors & Awards: DAAD scholarship for international research stays on artificial intelligence, BCG Emeralds