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Christian Reiser

Machine Learning Scientist/Engineer

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Technical Experience

Machine learning for Marketing — **Data Scientist & Engineer, NOV 2022 – Present**
e-dialog — *Vienna, Austria*
- Used tools: Google Cloud Platform (GCP), Data-warehousing with BigQuery and SQL, infrastructure as code with Terraform, CI/CD, Python, Scikit-learn, Data-Studio

Development of a scientific data-driven healthcare app — **Owner, APR 2020 – NOV 2022**
InsightMe — *Stuttgart, Germany*
- Inferring causal relationships from high dimensional time-series with contemporaneous links and latent confounders
- Learning simultaneously from observational and interventional data
- Robust What-if predictions under i.i.d. violation
- Deliver actionable insights by making cause-effect relationships explicit and recommending the regret-minimizing action
- Software development in Python, machine learning with scikit-learn, causal learning with tigramite
- Data extraction via APIs, transformation, loading, storing, visualization: Google Cloud Platform, Data Warehouse, Docker, Python, SQL, JSON, CSV, Flutter, Seaborn
- Machine learning and causal discovery: PyTorch, scikit-learn

Anomaly detection for smart factories — **Applied Data Scientist, APR 2022 - NOV 2022**
Phinc GmbH — *Stuttgart, Germany*
- Installed sensors, developed and deployed anomaly detection algorithm for CNC-milling machines capable of saving 40k € per detection.
- Tools used: Pycharm, Python, Jupyter Notebooks, pandas, multiprocessing, pickle, Linux

Autonomous flight of helicopters — **Intern and thesis student, APR 2018 – APR 2019**
Volocopter GmbH — *Bruchsal, Germany*
- Developed a vision-based hazard detector in Python that detects birds with superhuman accuracy in TensorFlow
- Deep learning of the detector in simulation, domain adaptation to the real world via GANs with PyTorch
- Developed and automated the IMU sensor calibration on which the Volocopter 2X fleet relies in C++ and Python
- Developed automated quality control algorithms for the IMU calibration process
- Scrum

Autonomous Driving: Programmed a car to drive autonomously in a test area — **Practical Course, JAN 2017 – DEZ 2017**
Udacity / Mercedes-Benz — *Stuttgart, Germany / California, United States*
- Teamwork as a team of five with
- Software development in Python, C++
- Deep Learning with TensorFlow
- Computer vision with OpenCV
- Robotic operating system (ROS)

Software Development — **Working student, MAR 2016 – OCT 2016**
Mercedes-Benz, Future Innovation Lab — *Sindelfingen, Germany*
- Developed a software tool in cooperation with a supplier

Publications

- Predicting and visualizing daily mood of people using tracking data — 2022
- Observational causal discovery with latent confounders — 2022
- Observational and interventional causal learning for regret-minimizing control — 2022

Education

M.Sc. Simulation Technology (Cluster of Excellence for Data-Integrated Simulation Science), *University of Stuttgart* — 2022
- Machine learning, incl. deep, supervised, unsupervised, and reinforcement learning
- Mathematical modeling
- Natural Language Processing
- Statistics
- Optimization
- Numerical simulation
- Signal processing

B.Sc. Aerospace Engineering, *University of Stuttgart* — 2019
Self-driving Cars Engineer Nanodegree, *Udacity* — 2017
School diploma, Awards: Ernst-Konfrányi-Prize, Paul-Schempp-Prize, *Fritz-Ruoff-Schule Nürtingen* — 2015
US Highschool, *Blackwell-High-School, United States* — 2011 – 2012