

# Max Ritter

## IT Freelancer | Cloud, DevOps & IoT

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### Working Experience

IT Freelancer 08/2021 - Now

Self-Employed, Munich

Max is a passionate IT Freelancer from Munich. He supports his clients in different industries and roles in the areas of Cloud, DevOps and the Internet of Things. He loves the challenges that ever-changing projects and technologies carry with them. His working modes are both high-level and hands-on, combining his entrepreneurial mindset and years of professional experience to deliver high-quality, state-of-the-art solutions for the client. Currently, he is working as Cloud Engineer in the AI recommendations team of a big car manufacturer. The technology stack is AWS focused and includes a wide range of services like AWS Lambda, EMR, Step Functions, EKS, ECR, ECS, API Gateway - all implemented using AWS CDK IaC tooling. GitHub Actions are used for the Continuous Deployment and Integration of updates.

IT Consultant 08/2020 - 07/2021

[Netlight GmbH, Munich](#)

Netlight Consulting is a Swedish IT company with 9 locations in Northern and Central Europe. As a consultant, Max was working in the fields of Cloud, DevOps and IoT to help leaders of the digital industry to be successful. For a big german customer in the fashion industry, he was realizing a cloud migration project from an on-premise datacenter to AWS. The whole infrastructure was built using IaC tools and serverless functions. For a company specializing in carbon dioxide air capture technology, he built a data platform on Microsoft Azure to capture, process and visualize sensor data from different plants. Next to his architectural role, he was implementing the project with Python, Spark and a low-code UI framework.

Co-Founder & CTO 07/2019 - 07/2020

[ParkDepot GmbH, Munich](#)

ParkDepot offers a turnkey solution for digital parking management. Its customers are big supermarket chains, franchise restaurants and gyms. Max founded the company together with four others in 2019. As a CTO, he was responsible for building the project, hiring, team building and making long-term strategic decision. His technological focus areas were Backend Development, Embedded Systems Design and Machine Learning including Deep Learning. Max created a scalable backend infrastructure for hundreds of parking lots on AWS, using state-of-the-art serverless technologies. He also implemented the firmware that runs inside a dockerized environment on the GPU edge device and can be updated with over-the-air updates.

### Tech Skills

Cloud



AWS, Azure, Python, Javascript / Typescript, SQL, GraphQL, Serverless, Apache Spark, Apache Kafka, Node.js, Databases, Data Warehouses, Data Lakes

DevOps



Docker, Github, Gitlab, CI / CD Pipelines, Logging, Monitoring, Alerting, Testing, Terraform, CDK

IoT



C, C++, FreeRTOS, AVR, ARM, Embedded Linux, OTA Updates, Sensors & Actuators, Edge AI (Deep Learning), Computer Vision, MQTT, BLE, FPGA

### Non-Tech Skills

Team Leading, Knowledge Transfer, Code Reviews, Continuous Self-Improvement and Self-Learning, Fast Prototyping, Scrum, Project Management, Getting Things Done, OKR

### Certificates

2021-11: AWS Certified Solutions Architect Professional

2021-10: AWS re/Start Accredited Instructor

Lead Software Engineer 03/2018 - 06/2019

### ParkHere GmbH, Munich

ParkHere delivers smart parking solutions for companies and car park operators. Max developed a significant part of the software for the basestation, a microcontroller-based system collecting sensor signals and sending them to the backend. He also worked on a new IoT product to authenticate vehicles at the barriers of parking lots by license plates or QR codes. In the Smart City domain, he realized a radar-based parking sensor and deployed first prototypes to various cities across Germany and Switzerland. Apart from development, Max was leading the Embedded Systems team and facilitated the roles of Product Owner and Scrum Master.

Software Engineer 09/2017 - 02/2018

### Bleenco GmbH, Munich

Bleenco is a startup with the mission to build AI powered technologies for improving human workforce. Its founder was seeking for a lead developer to begin the company's journey back in 2017 and was picking Max as the first full-time employee in the Munich office. Max laid out the foundation for "Bleenco Human", a modular framework for human-centered safety solutions. Its applications range from attention detection in autonomous driving to detection of protective equipment in the factory. He worked in the domains of computer vision, machine learning and edge inference to build Bleenco's first stable release of a product solution.

Master Thesis 03/2017 - 08/2017

### VECTOR Informatik, Stuttgart

The research and development team at Vector was looking for a master student to evaluate the potential use cases of Deep Learning for their products and services and to provide them with a plan how to train and use neural nets in their Advanced driver-assistance systems (ADAS) portfolio. Max's work at Vector was divided into three parts: In the first section, he created an overview about the state of the art technologies and their appliances in autonomous driving. In the second step, he sketched a process to design, train and use those deep neural networks in the ADAS domain, and showed pitfalls and best-practices to do so. In the last part, he used the created pipeline to implement a real world project. This so called end-to-end driving net started in a 3D simulation and was then ported to an embedded system inside a real car to give steering commands.

Part-Time Founder 12/2014 - 02/2017

### DIY-Thermocam

The DIY-Thermocam is an open-source, do-it-yourself thermographic camera for everyone. Its mission is to give private persons, educational institutes and small companies access to a portable and low-cost thermal imaging platform. Max started the project as part of his bachelor thesis back in 2014, and continuously worked on improving it until handing it over to a US company in 2017. The device was built by hundreds of people worldwide, forming an ecosystem of tools for open-source thermography. Max integrated a newly-released long-wave infrared radiation sensor from FLIR and built a printed circuit board to connect various peripheral devices to it.

2021-02: AWS Certified Data Analytics - Speciality

2020-12: AWS Certified SysOps Administrator Associate

2020-11: AWS Certified Developer Associate

2020-11: Hashicorp Terraform Associate

2020-09: AWS Certified Solutions Architect Associate

2019-07: Udacity C++ Engineer Nanodegree

2019-07: Entrepreneurship & Digital Transformation (Strascheg Center for Entrepreneurship)

2017-10: Udacity Self-Driving Car Engineer Nanodegree

## Education

2015 - 2017: M. Sc. Embedded Systems - Design and implementation of complex embedded systems

2011 - 2015: B. Sc. Applied Information Technology - Focus Areas: Automation Engineering and Information Networks

2003-2011: Abitur / A level

## Teaching Experience

2012-2014: Math Tutor - Private coaching, group lessons and high school diploma preparations

## Languages

German - native

English - fluent

## Hobbies

Skiing, Biking, Cooking, Reading, Windsurfing, Travelling