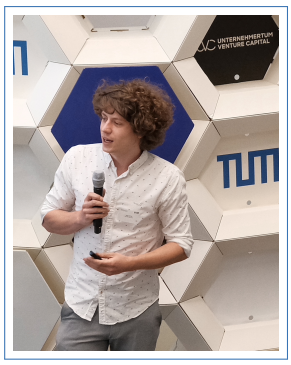

Lars Carius

Curriculum Vitae

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Education

4/2019 – 9/2021 Munich, DE
Master of Science in Robotics, Cognition, Intelligence, *TU Munich.*
Final Grade: 1.2, with high distinction
Award: best.in.tum (best students of the department of informatics)
Thesis: Augmented Reality as A Tool - Development of an Intuitive Cross-Platform Framework

10/2015 – 4/2019 Munich, DE
Bachelor of Science in Mechanical Engineering, *TU Munich.*
Final Grade: 1.4 (Top 1%), with distinction
Thesis: Artificial Intelligence for Cooperative Games

3/2015 Mainz, DE
Certificate of General Qualification for University Entrance (Abitur), *Otto-Schott-Gymnasium.*
Final Grade: 1.0 (100%)

1/2012 – 6/2012 Maroochydore, AUS
Exchange Semester, *Maroochydore State High School.*

Selected Projects and Practical Experience

1/2022 – today Munich, DE
Forward Deployed Engineer, *Palantir Technologies.*

9/2021 – today Munich, DE
Freelance Software Developer.
- Developed mobile applications for industrial and consumer use cases (Selected projects: Augmented a metal casting facility with virtual machinery for Fraunhofer IGCV Germany, supported Weald Creative (UK) in creating AR-rallies for retirement homes)
- Developed & Managed the open-source *AR Flutter plugin*, the most-used cross-platform Flutter plugin for Augmented Reality (github.com/CariusLars/ar_flutter_plugin)

4/2021 – today Munich, DE
Co-Founder & Managing Director of PLANOPTO UG, *www.callsheep.de.*
- Assumed a leading technical and managing role in the development of callsheep, a SaaS crew management tool for media production companies (Tech Stack: Angular+Typescript frontend, NodeJS backend, PostgreSQL database)
- Led an interdisciplinary team to grow the business, form strategic partnerships with existing market players, and scale the userbase

3/2020 – 9/2021 Munich, DE
Co-Founder & CEO of Chicken Technologies, *www.chicken-technologies.com.*
- Assumed a leading technical and managing role in the development and marketing of a mobile application for collaborative Augmented Reality to digitalize industrial processes (facility management, construction site logistics, indoor navigation)
- The app provides user-friendly placement, inter-device sharing, and retrieval of location-anchored, custom 3D objects by using Google's ARCore, Firebase, and Google Cloud Anchors

1/2021 – 7/2021 Munich, DE
Master's Thesis "Augmented Reality as a Tool – Development of an Intuitive Cross-Platform Framework", *TUM Entrepreneurial Masterclass*, TU Munich.
- Developed the *AR Flutter plugin*, a cross-platform Augmented Reality framework that enables businesses to utilize AR within their existing processes and technical infrastructure without the need for specially trained developers
- Developed a cloud-based AR content management system to reduce operating costs for businesses
- Grade: 1.0 (100%), published in IEEE VR 2022

10/2020 Bern, CH
YB Hackathon Runner-Up: NLP-based Customer Service Automation, *YB Bern & isolutions.*
- Conceptualized and implemented a customer service web app utilizing natural language processing to sort incoming requests, allocate suitable agents, and automatically provide reply suggestions

10/2019 – 2/2020 Munich, DE
Semester Paper: RGB-D Video Generation using GANs, *Dynamic Vision and Learning Group (Prof. Dr. Matthias Nießner), TU Munich.*
- Developed and trained deep learning models to predict future video frames and depth measurements from a set of consecutive input frames

4/2019 – 9/2019 Munich, DE
Working Student Simulation Development Autonomous Driving, *BMW Group*.
- Contributed features to the C++ traffic simulation software openPASS
- Oversaw the shift from local to on-demand cloud-based build and deployment infrastructure and implemented the build server architecture and workflows

2/2019 – 4/2019 London, UK
Team Leader in Autonomous Robot Racing League, *McLaren Applied Technologies*.
- Assumed technical lead over a team of McLaren data scientists to take part in Formula Pi

10/2018 – 4/2019 London, UK
Internship Modelling and Decision Science Engineer, *McLaren Applied Technologies*.
- Developed a compact vehicle dynamics simulator including traffic simulation to allow efficient testing of novel vehicle models in a desktop environment before deploying to the main on-premise simulator (multi-machine real-time implementation, accepted for the IEEE ICASSP conference)
- Developed multiple closed-loop advanced driver assistance systems for real-time driver-in-the-loop simulations (computer vision-based lane-keeping using simulated mono camera input, braking assistant using deep learning object detection combined with deterministic image analysis)

4/2018 – 10/2018 Munich, DE
Bachelor's Thesis "Artificial Intelligence for Cooperative Games", *Chair of Automotive Technology*, TU Munich.
- Demonstrated the capability of reinforcement learning agents to learn cooperative behavior by developing a set of multiplayer games, creating suitable neural network model architectures, and training the agents using reinforcement learning algorithms
- Grade: 1.0 (100%)

Selected Scholarships and Memberships

11/2019 – today Member of START Munich e.V.

4/2016 – 9/2021 Scholarship by the Friedrich Naumann Foundation for Freedom

9/2019 – 3/2021 Manage&More by UnternehmerTUM (entrepreneurship & leadership qualification program)

10/2020 Academy for Leadership & Personal Development by Munich School of Philosophy

11/2019 Think Digital scholarship by the Internet Business Cluster e.V. (IBC)

Technical Skills

SaaS Products
- Developed scalable cloud-based services driving digitalization in multiple industries
- Experienced in iterative product development based on continuous customer feedback
- Led interdisciplinary teams to build two product-centered software companies

Programming
- 2 yrs of experience in full-stack web app development (Typescript, Javascript, SQL)
- 3 yrs of experience in mobile app development on Android & iOS (Java, Kotlin, Swift, Flutter / Dart, ARCore, ARKit); deployment of NoSQL backends for collaboration
- Experienced in the use of Python for deep learning (PyTorch), computer vision (OpenCV), and data visualization
- Hands-on experience in automotive simulation engineering (programming in C++, Python, and Matlab/Simulink, deployment on simulator hardware, use of traffic simulation tools)

Infrastructure
- Deployed computational jobs in containers (Docker) on external servers/clusters
- Deployed SaaS products on AWS (callsheep) and Google Cloud (AR app backends)
- Experienced in team collaboration via Git, code review, cont. integration, build servers

Personal

Languages English (fluent; working language), German (native language), Italian (basics)

Extracurricular Activities

9/2021 Munich, DE
Workshop User-Centric Product Development, *Media Lab Bayern*.
- Guest talk as part of innovation strategy training for German broadcasting companies

10/2019 – 3/2021 Munich, DE
Team Leader Start-up Tour & Start-up World Tour, *Manage&More by UnternehmerTUM*.
- Led a team of five to organize a six-day trip for 20 people to Warsaw including the organization of company visits and workshops
- Organized monthly talks on current topics featuring international entrepreneurs

9/2017 – 9/2018 Munich, DE
Team Leader Digitalization of Teaching, *Gear Research Centre*, TU Munich.
- Supervised six employees and developed grading automation applications for Windows & Linux

6/2018 Munich, DE
Organization of a 3-Day Industry 4.0 Seminar for Students, *Friedrich Naumann Foundation for Freedom*.

11/2017 – 2/2018 Munich, DE
Junior Teaching Assistant, *Chair of Thermodynamics*, TU Munich.
- Distinction by the faculty: best exercise course