

Lars Carius

Curriculum Vitae

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Education

- 4/2019 – 9/2021 **Master of Science in Robotics, Cognition, Intelligence, TU Munich.**
Munich, DE 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 **Bachelor of Science in Mechanical Engineering, TU Munich.**
Munich, DE Final Grade: 1.4 (Top 1%), with distinction
Thesis: Artificial Intelligence for Cooperative Games
- 3/2015 **Certificate of General Qualification for University Entrance (Abitur), Otto-Schott-Gymnasium.**
Mainz, DE Final Grade: 1.0 (100%)
- 1/2012 – 6/2012 **Exchange Semester, Maroochydore State High School.**
Maroochydore, AUS

Selected Projects and Practical Experience

- 9/2021 – today **Freelance Software Developer.**
Munich, DE
 - 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 **Co-Founder & Managing Director of PLANOPTO UG, www.callsheep.de.**
Munich, 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 – today **Co-Founder & CEO of Chicken Technologies, www.chicken-technologies.com.**
Munich, DE
 - Assumed a leading technical and managing role in the development and marketing of a mobile application for collaborative Augmented Reality to digitize 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 **Master's Thesis "Augmented Reality as a Tool – Development of an Intuitive Cross-Platform Framework", TUM Entrepreneurial Masterclass, TU Munich.**
Munich, DE
 - 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%), submitted to IEEE VR 2022
- 10/2020 **YB Hackathon Runner-Up: NLP-based Customer Service Automation, YB Bern & isolutions.**
Bern, CH
 - 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 **Semester Paper: RGB-D Video Generation using GANs, Dynamic Vision and Learning Group (Prof. Dr. Matthias Nießner), TU Munich.**
Munich, DE
 - 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 **Working Student Simulation Development Autonomous Driving**, *BMW Group*.
Munich, DE
 - 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 **Team Leader in Autonomous Robot Racing League**, *McLaren Applied Technologies*.
London, UK
 - Assumed technical lead over a team of McLaren data scientists to take part in Formula Pi
- 10/2018 – 4/2019 **Internship Modelling and Decision Science Engineer**, *McLaren Applied Technologies*.
London, UK
 - 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 **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 digitization 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 **Workshop User-Centric Product Development**, *Media Lab Bayern*.
Munich, DE
 - Guest talk as part of innovation strategy training for German broadcasting companies
- 10/2019 – 3/2021 **Team Leader Start-up Tour & Start-up World Tour**, *Manage&More by UnternehmerTUM*.
Munich, DE
 - 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 **Team Leader Digitization of Teaching**, *Gear Research Centre*, TU Munich.
Munich, DE
 - Supervised six employees and developed grading automation applications for Windows & Linux
- 6/2018 **Organization of a 3-Day Industry 4.0 Seminar for Students**, *Friedrich Naumann Foundation for Freedom*.
Munich, DE
- 11/2017 – 2/2018 **Junior Teaching Assistant**, *Chair of Thermodynamics*, TU Munich.
Munich, DE
 - Distinction by the faculty: best exercise course