Leela Kondamadugula

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LinkedIn
Google Scholar
GitHub

Work Experience

Software Developer — **Agile Robots** — **Oct 2021–Present**
AI Department — Munich, Germany

- Designed and implemented software wrappers and APIs on top of hardware SDKs to enable internal tools and robotic applications.
- Developed modular C++ libraries for robot control, camera calibration, and perception integration in ROS2 environments.
- Streamlined software packaging and delivery using Docker, Conan, and CI/CD, improving internal deployment speed and stability.
- Collaborated with hardware teams to extend and debug SDK functionalities for new robotic components.
- Traveled to customer sites in China to implement, test and deliver on/site robotic solutions, ensuring smooth integration between software and hardware systems.
- Contributed to a Deep Learning object detection library and synthetic data generation pipeline.

ML Scientist — **Siemens** — **2020–2021**
Simulation Team — Munich, Germany

- Implemented Physics Informed Neural Networks for Digital Twin technology.
- This helped to perform better simulation testing and reduced failure costs by 10%.
- Prototyped a data-driven software based on Probabilistic Programming to predict structural failures.
- Gained experience in Python programming and worked with Deep Learning libraries such as PyTorch and TensorFlow.

Software Tester — **TÜV SÜD** — **2019–2020**
Munich, Germany

- Conducted software quality testing and documentation migration to Microsoft Azure DevOps, improving test traceability and coverage.

Education and Certifications

- **M.Sc. Computational Science and Engineering,** Technical University of Munich, Germany. **2018–2021**
- **B.E. Mechanical Engineering,** M.S. Ramaiah Institute of Technology, Bangalore. **2013–2017**

Technologies and Languages

- Languages: C++, Python, Rust, MatLab, Bash, CMake
- Technologies: ROS2, Docker, Conan, VCPKG, Git, LaTeX
- Concepts: Software architecture, Data structures, API design, SDK Development, Camera calibration, CI/CD
- Other: Jira, Confluence, HTML, CSS

Publications

- Generalized physics-informed machine learning for numerically solved transient physical systems (link)
- DG-GRU: Dynamic Graph based Gated Recurrent Unit for age and gender prediction using Brain Imaging (link)