PS RAHUL
MACHINE LEARNING ENGINEER

CONTACT

✉ psrahul.ml@gmail.com

📍 Bochum, Germany

🌐 linkedin.com/in/psrahul-ml

🌐 github.com/PSRahul

🌐 Certifications

PROJECTS

- CLIPtheCenter
- Image Editor with Stable Diffusion
- LLM Explorer
- PriorDepth
- Human Face Generator

EXTRA-CURRICULAR

- Dean's Merit List - SASTRA University
- Teaching Assistant - *Introduction to Deep Learning* course at TU Munich
- Research Assistant - Computer Vision Team at TU Munich. [Paper]

LANGUAGES

- English (Fluent)
- German (Intermediate)
- Tamil (Fluent)

EDUCATION

Technical University of Munich, Germany
M.Sc. Computational Science and Engineering
OCT 2019 - DEC 2022
CGPA 8.5 / 10

SASTRA University, India
B.Tech Mechanical Engineering
JUN 2013 - MAY 2017
CGPA 9.2 / 10

WORK EXPERIENCE

TÜV Rheinland AG
Computer Vision and Machine Learning Developer
MAY 2023 - APR 2024
BOCHUM, GER

- Conducted statistical analysis of 20k+ data samples and established end-to-end data pipelines with MongoDB, FastAPI and Label Studio for streamlined data retrieval.
- Designed and implemented a PyTorch-based distributed training infrastructure integrated with MLFlow monitoring. Introduced a novel data balancing algorithm, enhancing F1 Score from 40% to 70%.
- Deployed machine learning models as microservices using TorchServe REST APIs in a Kubernetes cluster. Improved inference time from 272 ms to 41 ms per sample.

PreciTaste
Machine Learning Researcher
MAY 2022 - DEC 2022
MUNICH, GER

- Proposed a multimodal few-shot object detection model named CLIPtheCenter, leveraging OpenAI's CLIP and CenterNet architectures for NLP-Vision tasks.
- Enhanced object detection precision from 17% to 50% utilizing the proposed deep learning model compared to the baseline CenterNet architecture.

Machine Learning Engineer - Part Time
OCT 2021 - APR 2022

- Conceptualized and implemented data-driven vision algorithms to segment the regions of interest in videos with PyTorch, replacing hand-written rules.
- Trained and deployed object detection neural models with up-to 95 percent mean precision for production projects.

IPS Intelligent Video Software
Machine Learning Intern
JUL 2021 - SEP 2021
MUNICH, GER

Developed deep learning-based proofs-of-concept for the detection of pedestrians from security camera devices using Tensorflow and OpenVINO.

Ashok Leyland
Graduate Engineering Trainee
JUL 2017 - AUG 2018
CHENNAI, IND

Worked on predictive reliability analytics for automotive product components.

SKILLS

Languages and Databases	Python, C, MongoDB, Redis
Machine Learning Toolkits	PyTorch, Tensorflow, Scikit-Learn, Optuna
MLOps Frameworks	MLFlow, Kubeflow, TorchServe, LabelStudio, FastAPI
Numerical Packages	Numpy, SciPy, OpenCV, Scikit-Image, Pandas
Developer Tools	Kubernetes, Docker, Earthly, AWS Certified Cloud Practitioner
Gen AI Tools	OpenAI API, LangChain, HuggingFace, Diffusion Models