



Linyan Yang

M.Sc. ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY · MACHINE LEARNING · ROBOTICS

Angererstraße 16, 80796 Munich, Germany

+49 17647731479 | linyan.yang@outlook.de | github.com/ly-muc | [linkedin.com/in/linyan-yang](https://www.linkedin.com/in/linyan-yang) |

Pronunciation: 'Lin' - 'Yen', 'Young'

Citizenship: German

Introduction

I have a strong background in software development and programming skills, complemented by an extensive understanding of interdisciplinary areas such as robotics and computer vision. I am looking for exciting opportunities as a Machine Learning Engineer or Scientist in Europe. Preferably based in the Munich metropolitan area, but I am open to remote positions.

Education

Technical University of Munich (TUM)

Munich, Germany

M.Sc. in Electrical Engineering and Information Technology

Apr 2021 - Jan 2024

- Final grade: 1.1/1.0 (high distinction, top 8%)
- Major in control theory (robotics) and artificial intelligence.
- Automation and robotics courses: Adaptive Control, Networked Control, Dynamic Systems, Optimal Control & Decision-Making.
- Artificial Intelligence Courses: Applied Machine Intelligence, Applied Reinforcement Learning, Machine Learning: Methods and Tools, Seminar Machine Learning, Embedded System Design for Machine Learning, High-Performance Computing for Machine Intelligence in C++/Python.

Eidgenössische Technische Hochschule Zürich (ETHZ)

Zurich, Switzerland

Master Thesis

Apr 2023 - Dec 2023

- @CVL Master Thesis: "Masking Image and Depth Features via Complementary Dropout for Domain-Adaptive Semantic Segmentation" (Vision Transformer, Semantic Segmentation, Depth Estimation)
Supervisor: Lukas Hoyer, Mark Weber (TUM), Tobias Fischer, Prof. Luc Van Gool.
- Submitted to top-tier computer vision conference as first author. Additionally, I published a workshop paper at CVPR 2024.
- Technical skills: Python (PyTorch, MMCV, MMSegmentation, OpenCV), Slurm, Wandb.

École Polytechnique Fédérale de Lausanne (EPFL)

Lausanne, Switzerland

M.Sc. in Electrical Engineering and Information Technology - Exchange Semester

Sep 2022 - Feb 2023

- Scholarship: Swiss-European Mobility Programme (SEMP)
- Grade: 5.83/6.0 (excellent)
- Coursework in statistics for data science, continuous optimization / statistical analysis in ML.
- @VITA Semester project: "Object-Centric Representation Learning for visually complex scenes". (Autoencoder, CNN, Image GPT, Slot Attention). Supervisor: Yuejiang Liu, Prof. Alexandre Alahi.
- "Efficient Unbiased Training of Large-scale Distributed Wasserstein Generative Adversarial Networks". (Gradient Quantization, Generative Models, Distributed Training). Supervisor: Igor Krawczuk, Prof. Volkan Cevher.
- Technical skills: Python (PyTorch / DDP), C++, Cuda, Docker, Kubernetes, Slurm, Wandb.

Technical University of Munich (TUM)

Munich, Germany

B.Sc. in Electrical Engineering and Information Technology

Sep 2017 - Mar 2021

- Final grade: 1.6/1.0 (with merit, top 12 %)
- Major in control theory (robotics) and artificial intelligence.
- @RSI Bachelor Thesis: "Development of an inertial measurement unit for robots under the impact." Supervisor: Prof. Sami Haddadin.
- Technical skills: Matlab, C, Infineon DAVE, Linux Real-Time Kernel, EtherLab, EtherCAT, ROS, Franka Emika Panda.

Work Experience

Infineon Technologies

Munich, Germany

Machine Learning Working Student

Apr 2022 - Aug 2022

- Worked on EU-funded project on ML in Edge Computing. Spiking neural networks for people counting/detection using radar signals.
- Technical skills: Python (TensorFlow, Nengo DL, MLFlow, Optuna, SciPy), Arch Linux.

National University of Singapore (NUS)

Singapore

Research Intern

Oct 2021 - Feb 2022

- Implemented Deep Reinforcement Learning Algorithms (Dueling DQN, Actor-Critic) for control problems in renewable systems.
- Technical skills: Python (NumPy, PyTorch, Gym), Matlab, Git.

BMW Group

Research Intern

- Integrated measurement equipment and verified CAN Bus in C++.
- Implemented test bench control structure and evaluated battery hysteresis behavior in Matlab.
- Technical skills: C++, Matlab.

Munich, Germany

Apr 2021 - Sep 2021

Chair of Automatic Control Engineering (Technical University of Munich)

Teaching Assistant

- "Control Systems 1" Fundamentals of control and standard controllers, stability analysis of control loops, state-based controller design, linear quadratic control, state observers of LTI systems.
- "Advanced Control and Robotics Lab" Phase-locked loop, feedback linearization, switching controllers, robust control, hybrid control system analysis, sliding mode controllers, impedance control for telepresence systems, observer design, and LQ control.

Munich, Germany

Apr 2020 - Aug 2021

Research Center for Energy Economics

Research Intern

- Research on forecasting load profiles of electric vehicles and the occupation of public charging stations using supervised machine learning.
- Technical skills: Python (Pandas, NumPy, Scikit-learn, Jupyter), Git, PostgreSQL.

Munich, Germany

Jan 2021 - Mar 2021

Infineon Technologies

Engineering Intern

- Programming M5Stacks using Arduino.
- Project with MFC, automated encryption with GnuPG and Cleopatra.
- Technical skills: Arduino, C++.

Munich, Germany

Dec 2018 - Apr 2019

Extracurricular

TUM Hyperloop

Technical University of Munich

- Worked on a demonstrator consisting of a 24-meter vacuum tube and a matching human-sized capsule.
- R&D of a synchronous long stator linear motor for a Maglev system (test track 24m), field-oriented-control of AC motor.
- Contact person for industry partners (responsible for variable-frequency drive), mentor to new members.

Munich, Germany

Oct 2019 - Aug 2021

Skills & Certifications

ML-Eng

Experience building and training ML and RL models with Pytorch and Tensorflow, including distributed training.

ML-Ops

Wandb, MLflow.

DevOps

Docker, Kubernetes, Slurm, Github CI.

Programming

Python (PyTorch, TensorFlow, NumPy, Pandas, Scikit-learn), C/C++, CUDA, Shell (Bash/Zsh), Matlab/Simulink, Scala.

Qualifications

2nd AutoML Fall School 2022, "Algorithmique parallèle et distribuée" (École Polytechnique Paris).

Certifications

"Reinforcement Learning", "Deep Learning", "TensorFlow 2 for Deep Learning", "Introduction to Machine Learning with TensorFlow", "Programming in C++ - Part 1+2" - vhb Certificate, "Introduction to Git and GitHub", "Functional Programming Principles in Scala".

Scholarships & Achievements

2023	System Design Contest , 60th Design Automation Conference (DAC), Presented at conference in San Francisco and received a cash prize. Keywords: Object Detection, Nvidia Jetson Nano GPU, TensorRT, ONNX.	USA
2022/23	Deutschlandstipendium , (German) Federal Ministry of Education and Research, top ~2% of students.	Germany
2021/22	Deutschlandstipendium , (German) Federal Ministry of Education and Research, top ~2% of students.	Germany
2021	Scholarship: EIKON e.V. , EIKON e.V. supports students during semesters abroad with scholarships.	Singapore

Languages

German

Native proficiency

English

Professional proficiency

Chinese

Professional proficiency

June 17, 2024, Munich

Z. Yang