

Akansh Maurya

Phone: +49 16091439776

Email: akanshmaurya@gmail.com

Github: <https://akansh12.github.io/>

LinkedIn: <https://www.linkedin.com/in/akansh-maurya/>

Address: Waldhausweg 15, Saarbrücken, Germany-66117



EDUCATION **Universität des Saarlandes**, Saarbrücken, Germany
Masters of Science, Visual Computing, April, 2023 - Present
GPA: 1.7
Institute of Engineering and Technology, Lucknow, India
Bachelor of Technology, Electrical Engineering, Sep. 2017 - July 2021
CGPA: 8.69/10

COMPUTER SKILLS **Programming Languages:** Python, MATLAB, C, C++
Technologies/Frameworks: Linux, GitHub, **Computer Vision**, Deep Learning, Audio Processing, Time-series Analysis, \LaTeX
Python Libraries: Pytorch, TensorFlow, OpenCV, Robot Operating System(ROS), Numpy, Matplotlib, Pandas, Librosa.

EXPERIENCE **HiWi-Research Assistant** I2SC, Societal Computing Lab
April 2023 - Present Saarbrücken, Germany



- Collaborating with **Prof. Ingmar Weber** on pioneering Deep Learning methods to detect mobility patterns from low-resolution **satellite images**.
- Build a pipeline to automate the satellite image data collection and pre-process from PlanetScope using Open Street Map(OSM).
- Developed a method to scrape Google Popular Times to create annotations for parking occupancy of satellite images.
- Presented my work among **100+** people at the I2SC kickoff conference and the latest progress at Max Planck Institute for Demographic Research.
- Currently in the process of submitting research to **WACV 2025**.

SONY **Healthcare Machine Learning** SONY Research India
Researcher Sept. 2022 - Feb 2023 Bengaluru, India

- Built **AI-powered** solutions for detecting of Chronic Obstructive Pulmonary Disease(COPD) from thermal images.
- Prepared clinical **data collection SOW**, Reviewed 12+ vendors.
- Collaborated with IIT KGP for data collection using their novel temperature-based sensor.

Post Baccalaureate Research Assistant Robert Bosch Center for Data Science and Artificial Intelligence
Sept. 2021 - Sept. 2022 Salt Lake City, UT



- Worked with **Dr. Ganapathy Krishnamurthi** to make interpretable weakly-supervised DL algorithms to detect and localize multiple abnormalities in Chest X-rays.
- **2 research papers** accepted at an International conference(**MICCAI 2021 and ISBI 2023**). **1 journal paper** under review at the Nature Communications.
- **Secured 3rd position** in Chest XR COVID-19 detection Grand Challenge among 200 teams.

- **Secured 13th position** in Pulmonary Artery Segmentation Challenge 2022 among 460 participants.

INTERNSHIPS

Research Intern

Signal Processing Interpretation and REpresentation (SPIRE) Laboratory,
Indian Institute of Science Bangalore
Bangaluru, India

Oct 2020 - May 2021



- Worked under the guidance of **Dr. Prashanta Kumar Ghosh** to build an app that can help detect an asthmatic patient based on cough sound and sustained phonation.
- Pre-processed 285 patient recordings for feature engineering and calculated statistical features on MFCCs and their derivatives for ML models.

Research Intern

Indian Institute of Technology, Bombay
Mumbai, India

May 2020 - July 2020



- Under the supervision of **Prof. Kavi Arya**, I developed a Deep Learning-based web app that automates verifying and validating ID card images; it reduced the processing time from **14 days to 3 hours**.
- Developed a RotateNet model that corrected orientated images, improved OCR results on rotated images, implemented text detection and recognition system, and got 27 fps speed to process images.

Publications

Google Scholar

Shambhat V, **Maurya A.**, Krishnamurthi G. et al. (2021). "A study on Criteria for Training Collaborator Selection in Federated Learning." (**MICCAI BrainLes 2021**)

Maurya A., Krishnamurthi G. et al. (2022). "PARSE challenge 2022: Pulmonary Arteries Segmentation using Swin U-Net Transformer(Swin UNETR) and U-Net" (**ISBI 2023**)

Maurya A., Manjrekar O., Arya K., et al. (2020). "A system for verifying non-standard personal identity documents using deep learning models(**Submitted ICDAR-IJDAR, 2021 journal track**).

LANGUAGES

English(C1, TOEFL 105, GRE 315), Hindi(Native), German(A1)

VOLUNTEER

Serving as Floor representative in my student dormitory, I conducted 3 events to make international students bond. (June 2024- Present)

Served as student join secretary at the Electrical Engineering Society, IET Lucknow. Organized 5 research talks and 2 technical workshops.

Served as academic assistant at PARMARTH-social club of IET Lucknow, I taught children from slums and conducted cloth and food distribution.

Interests

Chess(ELO 1486), Table Tennis, Badminton and Kho-kho.

Contacts

- **Dr. Ingmar Weber**, Alexander von Humboldt Professor in AI at Saarland University
- **Dr. Ganapathy Krishnamurthi**, Associate Professor at **IIT-Madras**
- **Dr. Nitin Anand Shrivastava**, Assistant Professor at **IET Lucknow**
- **Dr. Pushkar Tripathi**, Assistant Professor at **IET Lucknow**