

ANUPAM KAKKAR

+49 177 630 7494 • Freiburg, Germany • kakkaranupam@hotmail.com • [linkedin.com/in/kakkaranupam/](https://www.linkedin.com/in/kakkaranupam/)

EDUCATION

Albert-Ludwigs-Universität Freiburg, Germany

Apr 2018 – Present

M. Sc. Informatik | Note: 2.0 (Gut)

- *Specialization:* Machine Learning, Computer Vision, Advanced Databases.

Maharana Pratap University of Agriculture & Technology, India

Aug 2010 – June 2014

B. E. Computer Science & Engineering | GPA: 7.8 (Top 5%)

- *Key Courses:* Data Structures and Algorithms, Databases & Information Systems.

Central Board of Secondary Education, India

July 2008 – June 2010

All India Senior Secondary Certificate Examination | GPA: 9.2

- *Key Courses:* Mathematics, Computer Science.

EXPERIENCE

Greenventory

Apr 2020 - Present

Master Thesis Student | Freiburg, Germany

Thesis topic: Identify Components for Energy System Planning by Instance Segmentation of Street-View Images

- Created a data extraction pipeline to scrape and filter street view building façade images from multiple sources.
- Developed a semi-automated annotation strategy to prepare image datasets for segmentation and object detection tasks.
- Fine-tuned SOTA segmentation and image classification models (EfficientNet & MaskR-CNN) and improved the detection accuracy/recall by tuning hyperparameters.
- Prepared an end-to-end image processing pipeline which combines results from multiple prediction models.

Albert-Ludwigs-Universität Freiburg

Sep 2019 - Present

Research Assistant (Part Time) | Freiburg, Germany

Responsible for assisting in teaching and research activities for the Chair of Databases and Information Systems.

- Developed the project “Prototyping Databases for Clinical Administrative Usage” with Universitätsklinikum Freiburg.
- Tutored a class of 30 students for the subject Databases and Information Systems (Winter Semester 2019 & 2020).

Fraunhofer-Institut für Solare Energiesysteme ISE

Jan 2019 - Mar 2020

Scientific Assistant (Part Time) | Freiburg, Germany

Responsible for assisting in data and statistical analysis for the group Energy Systems and Energy Economics.

- Prepared a codebase to retrieve and analyse statistical data from Forschungsdatenzentrum (FDZ) using IBM SPSS and R.
- Redesigned a MS Excel based statistical calculator tool in R and improved data processing speed by 20%.

Infosys Limited

Oct 2014 – Jan 2018

Senior Systems Engineer | Pune, India

Developed software solutions and aided in business consulting and production support activities for banking clients.

- Developed customisation for core banking and loans modules in the Finacle Banking product suite.
- Discussed business requirements with clients and drafted software design documents for product customisation.
- Improved performance of batch report generation tool by tuning SQL queries and reduced the execution time by 30%.
- Supported clients in EOD/BOD operations and ensured minimal system downtime of production systems.
- Worked on end-to-end software development life cycle using Agile and Waterfall methods.

SKILLS

- **Core Programming:** C, C++, Python, R, Bash, Java, JavaScript, PL/SQL
- **Libraries & Frameworks:** Tensorflow, Keras, PyTorch, OpenCV, NumPy, SciPy, Pandas, sklearn
- **Web & Dev Tools:** Vue.js, HTML/CSS, JSON, Git, Bitbucket, GitLab CI, Jira
- **OS & Platforms:** Linux, Microsoft Azure, Google Cloud Platform, Docker
- **Databases:** MySQL, Oracle, PostgreSQL, MongoDB, HDFS

PROJECTS

Prototyping Databases for Clinical Administrative Usage

2019

- Designed a modular database system and created normalized database relations from ER models of the system.
- Designed the solution stack for interfacing with existing data storage systems and developed system integration scripts.
- Developed schedule management, order management and a web-based app for internal usage.

Computing Delay Statistics in Urban Public Transport System of Amsterdam

2019

- Parsed the GTFS Transit Feed for Amsterdam's Public Transport and collected real-time transport data.
- Searched for delay patterns in the transit data along tram lines using machine learning regression models.
- Created a tool to predict delay in live transit data with reasonable accuracy.

Performance Analysis of Recommender Systems using Category Based Collaborative Filtering

2014

- Analysed the performance of Recommendation Systems on the MovieLens dataset by comparing the performance of Collaborative Filtering and Category Based Collaborative Filtering Algorithms.

MISCELLANEOUS

Technical Certifications

- Microsoft Certified Solutions Expert (MCSE) – Cloud Platform and Infrastructure (Exams 473, 475, 532).
- Microsoft Certified Solutions Expert (MCSE) – Data Management & Analytics (Exams 473, 475, 773, 774).
- IBM Certified Application Developer – Cloud Platform v1 (Exam C5050-285).

Seminars

- The Break - Even Point on Optimization Trajectories of Deep Neural Networks (2020).
- Distributed Graph Processing with Pregel (2019).
- Discussion on NVIDIA Kepler GPU Architecture (2014).

Awards & Achievements

- Secured AIR 2 in the final merit list of CDS I Examination.
- Secured 1st Prize in Quiz in MPUAT's tech-fest PRATAP.
- Secured top 1 percentile in NIIT's National Aptitude Test – NITAT.

Language Proficiency

- Hindi (Native)
- English (C2)
- German (A1)

Interests

- Reading
- Racquet Sports
- Hiking / Cycling