

# Devesh Singh

✉ [devesh.singh@uni-rostock.de](mailto:devesh.singh@uni-rostock.de) 📍 Rostock, Germany

🌐 [linkedin.com/in/deveshsingh0016](https://www.linkedin.com/in/deveshsingh0016) 🐙 [github.com/devesh1611singh](https://github.com/devesh1611singh)

🆔 [orcid.org/0009-0003-9931-0710](https://orcid.org/0009-0003-9931-0710)

🔗 <https://devesh1611singh.github.io/portfolio/>



## 📁 Professional Experience

**Universitätsmedizin Rostock,**  
*Wissenschaftlicher Mitarbeiter / Research Scientist*  
Supported the operationalization of the Open Medical Inference (OMI) platform at UMR, empowering peer-to-peer exchange of healthcare data and remote AI services by implementing open protocols, integrating MII infrastructure, and streamlining deployment for partners

**German Center for Neurodegenerative Diseases (DZNE),**  
*Wissenschaftlicher Mitarbeiter / Research Scientist*  
09/2022 – 03/2025 | Rostock  
I develop explainable deep learning models and frameworks to help clinicians detect Alzheimer's from brain MRIs, focusing on end-to-end pipelines and their clinical utility to build trust in DL-assisted decisions.

**Data Science For Social Good (DSSGx),**  
*Research Fellow*  
06/2022 – 08/2022 | Kaiserslautern  
As a Data Science for Social Good (DSSG) Fellow in 2022 at TU Kaiserslautern, I collaborated with Paraguay's public procurement agency (DNCP) to detect fraud in procurement processes.

**SICK Sensor Intelligence, Master's Thesis**  
11/2021 – 04/2022 | Hamburg  
Setting up and testing a pipeline for synthetic data generation. Using generative deep learning models, CycleGANs and CUT, for an image translation (computer vision) task.

**SMA Solar Technology, Working Student R&D**  
03/2021 – 08/2021 | Remote (Germany)  
Developed time series models to forecast inverter failure risks and integrated legacy code following Git-flow principles using Azure DevOps.

**STIHL, Data Science and Big Data Analytics Intern**  
03/2020 – 09/2020 | Waiblingen  
Conducted statistical tests on damage correlation with usage, performed time series analysis on machine signals, supported data collection and management, and created visualizations using PowerBI dashboards.

## 🎓 Education

**Ph.D Student, The University Medicine Rostock**  
09/2022 – present | Rostock, Germany  
Expected graduation with a Dr. rer. hum.

**M.Sc. Data and Knowledge Engineering,**  
*Otto von Guericke University (OvGU)*  
10/2018 – 06/2022 | Magdeburg, Germany  
GPA: 1.3  
Machine Learning | Deep Learning | Generative Models | Information Retrieval | Heuristic Optimization | Business Analytics

**B.Tech. Information and Communication Technology,**  
*Dhirubhai Ambani Institute of Information and Communication Technology*  
08/2013 – 05/2017 | Gandhinagar, India  
Software Engineering | Database Management | Computer Networks | OOP Concepts

## 🧠 Skills

**Deep Learning Stack** ● ● ● ● ●  
TensorFlow, PyTorch, Keras

**Machine Learning Libraries** ● ● ● ● ●  
Pandas, Numpy, scikit-learn

**Coding Languages** ● ● ● ● ●  
Python, R

**Dashboarding Platforms** ● ● ● ● ●  
PowerBI, KNIME

**Database Stack** ● ● ● ● ●  
Microsoft SQL, PostgreSQL, PySpark, Hadoop


**Other Tools** ● ● ● ● ●  
Git, JIRA, Microsoft Office, Command-line, React APIs


## 🌐 Languages

**English** ● ● ● ● ●


**German** ● ● ● ● ●  
Enrolled for B1.1 level



## Publications



**[Preprint] An Unsupervised XAI Framework for Dementia Detection with Context Enrichment**   
2025

**Contrastive Self-supervised Learning for Neurodegenerative Disorder Classification,**  
*Frontiers in Neuroinformatics*   
2025

**[Preprint] SMAS: Structural MRI-Based AD Score using Bayesian VAE**   
Listed Coauthor.

**Evaluating the Fidelity of Explanations for Convolutional Neural Networks in Alzheimer's Disease Detection,**  
*Springer Fachmedien Wiesbaden GmbH*   
2025

**Computational Ontology and Visualization Framework for the Visual Comparison of Brain Atrophy Profiles,**  
*BVM Workshop, Springer Vieweg, Wiesbaden*   
2024  
Project GitHub 

**Comparison of CNN Architectures for Detecting Alzheimer's Disease using Relevance Maps, BVM Workshop. Wiesbaden: Springer Fachmedien Wiesbaden**   
2023  
Project GitHub 

## Other Academic Efforts

Have reviewed for and been a co-editor for the Journal of Alzheimer's Disease (JAD) (Impact Factor: 4.3, Year: 2024). Have also reviewed for Biological Psychiatry (Impact Factor: 9.6, Year: 2023) and Computers in Biology and Medicine (Impact Factor: 7.7, Year: 2022).

## Standardized Test Scores

**International English Language Testing System (IELTS)**  
2017

Score: 8.0

**Graduate Record Examination (GRE)**  
2016  
Score: 318

## References

**Dr. Martin Dyrba, Junior Group Leader, DZNE**  
martin.dyrba@dzne.de, +49 381 494-9482