

# Meghal Dani

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## Education

- 2026 (exp.) **International Max Planck Research School for Intelligent Systems (IMPRS-IS)**  
Ph.D. in Computer Science, University of Tübingen  
Supervisors: Dr. Prof. Zeynep Akata and Dr. rer. nat. Stefanie Liebe  
Research Interests: Medical AI, VLMs, LLMs, XAI, Neuroscience
- 2017 – 2019 **Indraprastha Institute of Information Technology Delhi (IIITD)**  
Masters of Technology, Computational Biology, Grade: 9.55/10  
Supervisors: Prof. Dr. Richa Singh and Prof. Dr. Mayank Vatsa, IAB@IIT Jodhpur
- 2012 – 2016 **Birla Institute of Technology (BIT), Mesra**  
Bachelors in Engineering, Computer Science, Grade: 8.47/10








## Research Experience

- Aug'19 – Aug'21 **Researcher, TCS Research and Innovation Labs**  
Deep Learning and Artificial Intelligence Lab, New Delhi  
Worked with Dr. Lovekesh Vig, Ramya Hebbalaguppe on Medical Image Analysis and 3D vision respectively.
- Aug'18 – Jul'19 **Graduate Student Researcher, Image Analysis and Biometrics Lab (IAB)**  
IIIT-Delhi (now moved to IIT-Jodhpur)





## Research Publications and Patents

- 1 M. Dani, M. J. Prakash, Z. Akata, and S. Liebe, "Semiollm: Assessing large language models for semiological analysis in epilepsy research," *arXiv preprint arXiv:2407.03004*, 2024.
- 2 M. Dani, I. Rio-Torto, S. Alaniz, and Z. Akata, "Devil: Decoding vision features into language," in *DAGM GCPR (Oral)*, Springer, 2023, pp. 363–377.
- 3 M. Sheoran, M. Dani, M. Sharma, and L. Vig, "An efficient anchor-free universal lesion detection in ct-scans," in *2022 IEEE 19th International Symposium on Biomedical Imaging (ISBI)*, IEEE, 2022, pp. 1–4.
- 4 M. Sheoran, M. Dani, M. Sharma, and L. Vig, "Dkma-uld: Domain knowledge augmented multi-head attention based robust universal lesion detection," *BMVC*, pp. 363–377, 2022.
- 5 M. Sheoran, M. Sharma, M. Dani, and L. Vig, "Handling domain shift for lesion detection via semi-supervised domain adaptation," in *ACCV*, Springer, 2022, pp. 98–112.
- 6 M. Dani, K. Narain, and R. Hebbalaguppe, "3dposelite: A compact 3d pose estimation using node embeddings," in *WACV*, Springer, 2021, pp. 1878–1887.
- 7 M. Dani, A. Popli, and R. Hebbalaguppe, "Posefromgraph: Compact 3-d pose estimation using graphs," in *SIGGRAPH Asia*, 2020, pp. 1–4.
- 8 M. Dani, G. Garg, R. Perla, and R. Hebbalaguppe, "Mid-air fingertip-based user interaction in mixed reality," in *ISMAR*, IEEE, 2018, pp. 174–178.




## Awards and Achievements

- 2023  **IMPRS-IS Scholar:** Tübingen, Germany
- 2022  **ClinBrAI PhD Fellowship:** by EKFS, Tübingen, Germany
- 2020  **Employee Recognition:** Earned an accolade by Prof. Dr. Jeffrey Ullmann for developing an AR project for TCS annual ceremony.
- 2019  **Best Thesis Award Nominee:** for masters thesis at IIIT-Delhi
- 2017  **Postgraduate Fellowship:** Received funding from the Government of India
- 2016  **Hackathon Winner:** Secured 1st position in a 2-day hackathon held at Verizon, Chennai.
- 2014  **Special Recommendation from IIM-A:** during internship for distinguished effort and outstanding performance.






## Other Projects and Patents

- 2023  **Towards Automatized Analysis of Epileptic Seizure Behavior in VEEG Recordings**  
This multi-modal work aims towards pose estimation and trajectory analysis of epilepsy patients.  
 **Patent:** Method and system for domain knowledge augmented multi-head attention based robust universal lesion detection (filed)
- 2022  **Patent:**Methods and systems for generating end-to-end model to estimate 3-dimensional (3-d) pose of object (filed)
- 2018  **Masters Thesis: An fMRI Investigation of Autism Spectrum Disorder: Detection and Analysis**  
The work quantifies the occurrence of camouflage in female subjects and its effect on their cognitive brain regions.




## Skills

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|------------------------|---|
| Coding Languages       |  Python, R, MATLAB, SQL, C/C++, Java, HTML, CSS, $\text{\LaTeX}$                             |
| Tools and Technologies |  python, pytorch, keras, OpenCV, HuggingFace, Langchain, Nilearn, scikit-learn, scikit-image |
|                        |  Linux, Git, bash, inkscape, SLURM, HPC Servers  |

## Workshops and Summer Schools

- 2024  **Connecting Minds and Machines** workshop at Helmholtz AI, Munich, Germany  
 **CyberValley Days**, Max Planck Institute for Intelligent Systems and Amazon, Tübingen, Germany
- 2023  **Bernstein Conference**, Berlin, Germany  
 **IMPRS-IS BootCamp** Tübingen, Germany  
 **Oxford MLxHealth Summer School** Oxford, United Kingdom

## Academic Service

-  **Reviewer** at ECCV, MICCAI, ICML, ACCV in 2024 and ICCV in 2023
-  **Ph.D. Representative in Search Committee** for Tenure-Track Professor of Machine Learning and Intelligent Systems.
-  **IMPRS-IS Interview Symposium Helper** involved in recording and moderating candidate talks