

# Smriti Joshi

PhD Candidate at Artificial Intelligence in Medicine Lab (BCN-AIM)

✉ [smriti161096@gmail.com](mailto:smriti161096@gmail.com) | [in linkedin.com/in/smriti1610/](https://www.linkedin.com/in/smriti1610/) | [🌐 Google Scholar](https://scholar.google.com/citations?user=...) | [🌐 github.com/smriti-joshi](https://github.com/smriti-joshi)

## SUMMARY

---

PhD Candidate with **4+ years** of experience developing and validating robust deep learning models for medical data. Leading key research within the EU funded *RadioVal* project, involving regular collaboration with clinicians to translate heterogeneous MRI data into prediction models. Research centers on trustworthy AI, with core expertise in *domain adaptation* and *uncertainty estimation*.

## EXPERIENCE

---

### PhD Researcher

BCN-AIM Laboratory, University of Barcelona

**2021 - Now**

*Barcelona, Spain*

*Uncertainty Estimation, Test-time Adaptation, Generative Imaging, Breast Cancer, MRI*

- Explored adaptive and interpretable AI methods with a focus on understanding and improving model behavior under domain shifts.
- Co-organized MAMA-MIA Challenge @ MICCAI 2025 for generalizable and fair tumor segmentation and pathologic complete response prediction using Breast MRI.
- Contributed to research in trustworthy AI, including the FUTURE-AI framework.

### Research Fellow

VCG SEAS, Harvard University

**Feb. 2021 - July 2021**

*U.S.A (Remote)*

*Self-supervised learning, Microscopic Brain Imaging*

Development of unsupervised domain adaptation technique for large scale connectomics dataset.

## EDUCATION

---

### PhD. Mathematics and Computer Science

Artificial Intelligence in Medicine Lab (BCN-AIM), Universitat de Barcelona

**2022 (ongoing)**

*Spain*

*Summer School: International Computer Vision Summer School, 2025*

### MSc. Image Processing and Computer Vision

UBx, UAM, PPCU <sup>1</sup>

**2019 - 2021**

*France, Spain, Hungary*

### Integrated MSc. in Physics

Birla Institute of Technology and Science, Pilani

**2014 - 2018**

*India*

## SELECTED PUBLICATIONS

---

### Single Image Test-Time Adaptation via Multi-View Co-Training, [MICCAI 2025](#).

[Smriti Joshi](#), Richard Osuala, Lidia Garrucho, Kaisar Kushibar, Dimitri Kessler, Oliver Diaz, Karim Lekadir

### Leveraging epistemic uncertainty to improve tumour segmentation in breast MRI: an exploratory analysis, [SPIE 2024](#).

[Smriti Joshi](#), Richard Osuala, Lidia Garrucho, Apostolia Tsirikoglou, Javier del Riego, Katarzyna Gwoździewicz, Kaisar Kushibar, Oliver Diaz, Karim Lekadir

### nn-UNet training on CycleGAN-translated images for cross-modal domain adaptation in biomedical imaging, [CrossMoDA Challenge @ MICCAI 2021](#).

---

<sup>1</sup>University of Bordeaux, Autonomous University of Madrid and Pázmány Péter Catholic University respectively

Smriti Joshi, Richard Osuala, Carlos Martín-Isla, Victor M Campello, Carla Sendra-Balcells, Karim Lekadir, Sergio Escalera

**Stakeholder Engagement for Trustworthy AI: Experiences and Results from the RadioVal Project on Breast Cancer Imaging.** [Book Chapter on Trustworthy AI in Cancer Imaging Research 2025.](#)

Miriam Cabrita, Carina Dantas, Harm op den Akker, Maciej Bobowicz, Silvia Navarro, Gloria Ribas, Dimitri Kessler, Richard Osuala, Oliver Díaz, Karim Lekadir, [Smriti Joshi](#)

**Simulating dynamic tumor contrast enhancement in breast MRI using conditional generative adversarial networks,** [Journal of Medical Imaging 2025](#)

Richard Osuala, [Smriti Joshi](#), Apostolia Tsirikoglou, Lidia Garrucho, Walter HL Pinaya, Daniel M Lang, Julia A Schnabel, [Oliver Díaz](#), Karim Lekadir

**A large-scale multicenter breast cancer DCE-MRI benchmark dataset with expert segmentations,** [Scientific Data 2025](#)

Lidia Garrucho, Kaisar Kushibar, Claire-Anne Reidel, [Smriti Joshi](#), Richard Osuala.....Karim Lekadir

## LEADERSHIP & IMPACT

---

**Lead, AI Working Group,** *European Union Horizon Europe Project – RadioVal* **2022–2023**

- Coordinated all AI-related projects within the international consortium of 16 partners.
- Facilitated interdisciplinary collaboration to ensure **clinically-informed AI model development.**

**Lead, Grant Selection & Sponsorship Committee,** *MICCAI 2024 LMIC Initiative* **2023–2024**

- Led the selection process for **> 50** early career researcher from *lower-to-middle income countries*, supporting their attendance at *MICCAI 2024*.
- Secured sponsorships and coordinated finances to maximize the impact of the programme.

**Coordinator,** *AFRICAI Summer School, and Annual Nepal AI School* **2022–2024**

- Organized international AI schools, fostering research collaboration across Africa and South Asia.
- Coordinated **one-year** mentorship programs for African researchers for capacity-building and career development in medical AI domain.

## Mentorship

- Master in Data Science 2025 @ Universitat de Barcelona, Lecture on *Domain Adaptation*.
- ESMPE 2023 AI in Medical Physics, Lecture on *Data acquisition, Curation and Storage*.
- Mentor @ RISE-MICCAI Winter School 2022.

## ACHIEVEMENTS & HONORS

---

- Top-2 solution in the **ODELIA Challenge** @ MICCAI 2025.
- Erasmus Mundus Master Scholarship (2019 - 2021).
- **Honors MSc.** in Image Processing and Computer Vision (IPCV).

## LANGUAGES

---

English (Proficient), Hindi (Native), Spanish (B1), French (A2), Hungarian (A1)