

Dipam Goswami

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Education

Universitat Autònoma de Barcelona

PHD IN COMPUTER SCIENCE

- Research on Continual Learning, Federated Learning, Information Retrieval

Barcelona, Spain

March 2023 - Feb 2026

Birla Institute of Technology and Science, Pilani

B.E. IN COMPUTER SCIENCE ENGINEERING, M.Sc. IN MATHEMATICS

- Cumulative GPA of 8.35/10

Rajasthan, India

Aug 2017 - July 2022

Experience

Computer Vision Center (Dr. Joost van de Weijer, Dr. Bartłomiej Twardowski)

PRE-DOCTORAL RESEARCHER, LEARNING AND MACHINE PERCEPTION TEAM (LAMP)

- **Federated Learning** with Pre-trained Models
- Continual Learning for **Information Retrieval**
- Exemplar-Free **Class-Incremental Learning**, Continual Few-shot Learning and Continual Object Detection

Barcelona, Spain

Sept. - Nov. 2022 | March 2023 - Present

Sony AI (Dr. Joan Serra)

ASSISTANT AI RESEARCHER

- Exploring training data attribution methods for **Diffusion Models**

Barcelona, Spain

June 2025 - Oct 2025

KU Leuven (Dr. Guido van de Ven, Prof. Tinne Tuytelaars)

RESEARCH INTERN, PSI GROUP

- Investigating modality gap in **Vision-Language Models**

Leuven, Belgium

January 2025 - March 2025

IDEAS NCBR (Dr. Bartłomiej Twardowski)

RESEARCH INTERN, ZERO-WASTE MACHINE LEARNING GROUP

- Continual Learning with **Dense Retrieval Embedding Models**

Warsaw, Poland

June 2024 - August 2024

German Research Center for Artificial Intelligence - DFKI (Prof. Didier Stricker)

RESEARCH ASSISTANT, AUGMENTED VISION DEPARTMENT

- Class-Incremental Learning for **Semantic Segmentation**

Kaiserslautern, Germany

Feb 2022 - July 2022

Teaching Assistant (Dr. Vinti Agarwal)

BITS PILANI, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

- Conducting weekly Lab sessions and assisting in preparing problems and solutions for the **Graph Mining** course

Rajasthan, India

August 2021 - December 2021

IMEC, Belgium (Dr. Bappaditya Dey, Dr. Sandip Halder)

RESEARCH INTERN

- **Anomaly Detection** for CD-SEM images to detect defects in manufacturing process

Leuven (Remote)

May 2021 - July 2021

Chloropy Technologies Pte Ltd.

COMPUTER VISION INTERN

- **Monocular Depth Estimation** to estimate plant heights from drone videos and generation of their 3D representations from depth maps

Singapore (Remote)

May 2020 - July 2020

Publications

- Liu Y, Hong Q, Huang L, Gomez-Villa A, **Goswami D**, Liu X, van de Weijer J, Tian Y. “Continual Learning for VLMs: A Survey and Taxonomy Beyond Forgetting.” (Preprint)
- Yu L, Tao Z, **Goswami D**, Yao H, Twardowski B, Van de Weijer J, Xu C. “Exploiting the semantic knowledge of pre-trained text-encoders for continual learning” (Preprint)
- **Goswami D**, Magistri S, Wang K, Twardowski B, Bagdanov AD, van de Weijer J. “Covariances for Free: Exploiting Mean Distributions for Training-free Federated Learning” (**NeurIPS 2025**)
- **Goswami D**, Wang L, Twardowski B, van de Weijer J. “Query Drift Compensation: Enabling Compatibility in Continual Learning of Retrieval Embedding Models” (**CoLLAs 2025**)

- Gomez-Villa A, **Goswami D**, Wang K, Bagdanov AD, Twardowski B, van de Weijer J. “Exemplar-free Continual Representation Learning via Learnable Drift Compensation.” (**ECCV 2024**)
- **Goswami D**, Soutif-Cormerais A, Liu Y, Kamath S, Twardowski B, van de Weijer J. “Resurrecting Old Classes with New Data for Exemplar-Free Continual Learning.” (**CVPR 2024**)
- **Goswami D**, Twardowski B, Van De Weijer J. “Calibrating Higher-Order Statistics for Few-Shot Class-Incremental Learning with Pre-trained Vision Transformers.” (**CLVision Workshop - CVPR 2024**)
- **Goswami D**, Liu Y, Twardowski B, van de Weijer J. “FeCAM: Exploiting the Heterogeneity of Class Distributions in Exemplar-Free Continual Learning”. (**NeurIPS 2023**)
- Liu Y, Cong Y, **Goswami D**, Liu X, van de Weijer J. “Augmented Box Replay: Overcoming Foreground Shift for Incremental Object Detection”. (**ICCV 2023**)
- Aggrawal HO, **Goswami D**, Agarwal V. “Bounding Box Priors for Cell Detection with Point Annotations”. (**ISBI 2023**)
- **Goswami D**, Schuster R, van de Weijer J, Stricker D. “Attribution-aware Weight Transfer: A Warm-Start Initialization for Class-Incremental Semantic Segmentation”. (**WACV 2023**)

Academic Experience and Contributions

Reviewer in Conferences	NeurIPS, ICLR, ICML, AI STATS, CoLLAs, CVPR, ECCV, ICCV, WACV, BMVC
Reviewer in Journals	TPAMI, IJCV, TMLR, TNNLS, TIP
Conferences Attended	ICCV 2023; NeurIPS 2023; CVPR 2024, CoLLAS 2025
Other Events	Summer School on Generative Modeling (Copenhagen, 2023), ELLIS Doctoral Symposium (Warsaw, 2025)

Talks

- Exemplar-Free Continual Learning. In Data Science Summit, Warsaw, 2024.
- Exemplar-Free Continual Learning. Invited talk in GMUM Seminar, Jagiellonian University, Krakow, 2024.
- FeCAM: Exploiting the Heterogeneity of Class Distributions in Exemplar-Free Continual Learning. In Deep Learning Barcelona Symposium (DLBCN), Barcelona, 2023.
- Continual Test-time Adaptation for Semantic Segmentation and Object Detection. In Visual Continual Learning Workshop, ICCV, Paris, 2023.