Anna Vettoruzzo

PH.D. STUDENT · SCHOOL OF INFORMATION TECHNOLOGY

Halmstad University, Kristian IV:s väg 3, 30118 Halmstad, Sweden

✉ anna.vettoruzzo@hh.se | ⬚ https://github.com/annaVettoruzzo | ⬚ https://www.linkedin.com/in/anna-vettoruzzo/

Education

Halmstad University   *Halmstad, Sweden*

PHD STUDENT IN SCHOOL OF INFORMATION TECHNOLOGY   *2021 - present*

- Advisors: Mohamed-Rafik Bouguelia and Thorsteinn Rognvaldsson.
- Topic: Towards more generalizability of machine learning models through the usage of meta-learning techniques.
- Preliminary PhD defense date: January 2024.

Eindhoven University of Technology   *Eindhoven, Netherlands*

VISITING PHD   *Aug 2023 - Dec 2023*

- Supervisor: Joaquin Vanschoren.
- Topic: Integrating meta-learning techniques for effective continual learning.

Padova University   *Padova, Italy*

M.SC IN ICT FOR INTERNET AND MULTIMEDIA, CURRICULA LIFE AND HEALTH   *2019 - 2021*

- Advisor: Ph.D. Giulia Cisotto
- Thesis title: "Modelling MEG-based resting-state functional connectivity to predict inter-individual differences in motor tasks".

Padova University   *Padova, Italy*

B.SC IN INFORMATION ENGINEERING   *2016 - 2019*

Professional Experience

2021-present	**Graduate teaching assistant**, Halmstad University, Halmstad, Sweden
2021	**Undergraduate Research Assistant**, ERC HANDMADE Project, CosyncLab, Rome, Italy

Publications

PUBLISHED

Anna Vettoruzzo, Joaquin Vanschoren, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Learning to Learn without Forgetting using Attention. *The third Conference on Lifelong Learning Agents (CoLLAs) (2024).*

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, Joaquin Vanschoren, Thorsteinn Rögnvaldsson, and K. C. Santosh. Advances and Challenges in Meta-Learning: A Technical Review. *IEEE Transactions on Pattern Analysis & Machine Intelligence (2024).*

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Multimodal Meta-Learning through Meta-Learned Task Representations. *Neural Computing and Applications (2024).*

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Meta-Learning for Efficient Unsupervised Domain Adaptation. *Neurocomputing (2024).*

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Personalized Federated Learning with Contextual Modulation and Meta-Learning. *SIAM Conference on Data Mining (SDM) 2024.*

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Meta-Learning from Multimodal Task Distributions Using Multiple Sets of Meta-Parameters. *International Joint Conference Neural Networks (IJCNN) 2023.*

Ottavia Maddaluno, Roberto Guidotti, **Anna Vettoruzzo**, Laura Marzetti, Giulia Cisotto, Viviana Betti. Spectral Connectivity Fingerprint in the Resting Human Brain: A MEG Study. Neuroscience 2022.

IN REVIEW

Anna Vettoruzzo, Lorenzo Braccaioli, Joaquin Vanschoren, Marlena Nowaczyk. Unsupervised meta-learning via in-context learning. 2024

Anna Vettoruzzo, Mohamed-Rafik Bouguelia, and Thorsteinn Rögnvaldsson. Efficient Few-Shot Human Activity Recognition via Meta-Learning and Data Augmentation. 2024

Awards, Fellowships, & Grants

2023	**TAILOR Connectivity Fund.**, Project title: Meta-learning for Continual Learning. Visit to Automated Machine Learning Group, Eindhoven University of Technology (Netherlands). Collaborator at the host institution: Joaquin Vanschoren.

Presentations

INVITED TALKS

June 2024. *Learning to Learn without Forgetting using Attention*. Invited talk: 4th TAILOR Conference – Trustworthy AI from lab to market, Lisbon, Portugal.

CONTRIBUTED PRESENTATIONS

Anna Vettoruzzo. 2024. Personalized Federated Learning with Contextual Modulation and Meta-learning. Oral presentation: SIAM Conference on Data Mining, Houston, Texas.

Anna Vettoruzzo. 2023. Meta-learning from Multimodal Task Distributions using Multiple Sets of Meta-Parameters. Oral presentation: International Joint Conference Neural Networks, Gold Coast, Australia.

Teaching Experience

2022 - 2024	**Introduction to Data Science**, Teaching Assistant, Applied Artificial Intelligence program.	*Halmstad University*
2022 - 2024	**Machine Learning**, Teaching Assistant, MAISTR program.	*Halmstad University*
2022 - 2024	**Learning Systems**, Teaching Assistant, Computer Science and Engineering program, Master's program in Embedded and Intelligent Systems and Master's program in Information Technology.	*Halmstad University*
2022 - 2023	**Perspectives on Computer Science and Engineering**, Teaching Assistant, Data Science program.	*Halmstad University*

Outreach & Professional Development

DEVELOPMENT

Conference organizer - ITE PhD Conference 2023. Internal conference at The School of Information Technology (ITE), Halmstad University, Sweden.

PEER REVIEW

IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE.
Machine Learning Journal, Springer.

COURSES AND CERTIFICATES

Learning and teaching in higher education I. Modules: (1) The Lecturer, the University and the Assignment; (2) Educational Basic and Didactic Perspectives; (3) Course Design and Evaluation.