

WERONIKA HRYNIEWSKA-GUZIŁ

Computer Science PhD Student

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📍 Warsaw, Poland
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🌐 hryniewska.github.io/website

in hryniewska

🔗 Hryniewska

EXPERIENCE

Mi2.ai

Research Scientist

📅 Oct 2019 – Present

- Leading and coding in projects related to neural networks
- Writing scientific papers
- Python, PyTorch, Keras

Warsaw University of Technology

Research and Teaching Associate at the Faculty of Mathematics and Information Science

📅 Oct 2019 – Feb 2023

Teaching:

- 2021/2022 Case Studies - lecture about Git, \LaTeX , bibliography, containerization
- 2021/2022 Case Studies - laboratories: preparation and creation of simple models on tabular, image and text data
- 2020/2021 Case Studies - laboratories: Deep Learning in Computer Vision (entire training pipeline, advanced transfer learning, and model explainability)
- 2019/2020 Text Mining (co-teaching) - laboratories and project

Thesis supervision:

- B.Sc. thesis "Ensemble explanations in image classification" defended by M. Sperkowski, and B. Sawicki (Feb 2023)

Samsung Electronics

Junior Data Scientist

📅 Jul 2019 – Nov 2019

- Writing project proposals and preparation of prototypes related to multimodality, inpainting, and eye tracking. 2 out of 3 finished with getting a new project that was launching for many years.
- Python, Bash

AI Trainee

📅 Oct 2018 – Jun 2019

- Code optimizations
- C++, Bash

NLP/AI Intern

📅 Jun 2017 – Jan 2018

- Working in Scrum methodology on preparing the engine for Natural Language Generation project working on Android phones.
- C++14, Python, Bash
- OS: Linux, Windows
- Tools: Git, Gerrit, Gitlab, Jenkins

STRENGTHS

Deep Learning

Computer Vision

Eye for detail

Self-motivated

Logical thinking

Creative

EDUCATION

Ph.D. in Computer Science

Warsaw University of Technology, Poland

📅 Oct 2019 – Present (planned Dec 2024)

Thesis title: A multi-level perspective on the deep learning models and human-oriented explanations with applications on medical images.

M.Sc. in Computer Science

Łódź University of Technology, Poland

📅 Feb 2017 – Dec 2018

Speciality: Intelligent Systems and Software Engineering

Thesis title: Eye movements, attention and comfort in VR. The role of brightness, colour and contrast in perception and memory.

Erasmus exchange

University of Hertfordshire, UK

📅 Feb 2017 – May 2018

Project title: Assessing Features Perception in Virtual Reality through Eye Tracking

B.Sc. in Mechatronics

Warsaw University of Technology, Poland

📅 Oct 2013 – Feb 2017

Speciality: Multimedia Techniques

Thesis title: Eye tracker implementation and conducting preliminary studies on the use for picture faults indication

High school

XIV Stanisław Staszic High School, Warsaw

📅 Sept 2010 – May 2013

The best high school in Poland according to rankings.

Eyetracking

Eye tracking Intern

📅 Sep 2016 – Oct 2016

- Participation in all stages of eye tracking project

AD INFO Bazy Danych (Databases)

Technical Support Service Employee

📅 summer holidays 2013 – 2015

- Inserting and updating records in the SQL database
- Selenium IDE, Jira, contact with an English-speaking client

PUBLICATIONS

📄 Journal Articles

- **W. Hryniewska**, A. Grudzień, and P. Biecek, "LIMEcraft: Hand-crafted superpixel selection and inspection for Visual eXplanations," *Machine Learning*, 2022. DOI: 10.1007/s10994-022-06204-w.
- **W. Hryniewska**, P. Bombiński, P. Szatkowski, P. Tomaszewska, A. Przelaskowski, and P. Biecek, "Checklist for responsible deep learning modeling of medical images based on COVID-19 detection studies," *Pattern Recognition*, vol. 118, p. 108 035, 2021. DOI: <https://doi.org/10.1016/j.patcog.2021.108035>.

👥 Conference Articles

- **W. Hryniewska-Guzik**, J. Bilski, J. Brojacz, B. Chrostowski, J. D. Sbahi, and P. Biecek, "A comparative analysis of deep learning models for lung segmentation on X-ray images," in *PP-RAI conference*, 2024. arXiv: 2404.06455.
- **W. Hryniewska-Guzik**, L. Longo, and P. Biecek, "CNN-based explanation ensembling for dataset, representation and explanations evaluation," in *World XAI conference*, 2024. arXiv: 2404.10387.
- **W. Hryniewska-Guzik**, M. Kędzierska, and P. Biecek, "Multi-task learning for classification, segmentation, reconstruction, and detection on chest CT scans," in *PP-RAI conference*, 2023. arXiv: 2308.01137.
- M. Spytek, **W. Hryniewska-Guzik**, J. Zygierec, J. Rogala, and P. Biecek, "Challenges facing the explainability of age prediction models: Case study for two modalities," in *AAAI Workshops (Health Intelligence W3PHIAI-23)*, 2023. arXiv: 2303.06640.
- **W. Hryniewska**, P. Czarnecki, J. Wiśniewski, P. Bombiński, and P. Biecek, "Prevention is better than cure: A case study of the abnormalities detection in the chest," in *CVPR Workshops (Beyond Fairness: Towards a Just, Equitable, and Accountable Computer Vision)*, 2021. arXiv: 2305.10961.

📄 Preprints

- **W. Hryniewska-Guzik**, B. Sawicki, and P. Biecek, *NormEnsembleXAI: Unveiling the strengths and weaknesses of XAI ensemble techniques*. 2024. arXiv: 2401.17200.
- **W. Hryniewska-Guzik** and P. Biecek, *X-ray transferable polyrepresentation learning*. 2023.

LANGUAGES

Polish	● ● ● ● ●
English	● ● ● ● ●
German	● ● ● ● ●
Spanish	● ● ● ● ●
Mandarin Chinese	● ● ● ● ●

ATTENDED SCHOOLS AND CONFERENCES

- Summer School on Large-Scale AI for Research and Industry, 2023.
- Privacy-Preserving Machine Learning school, 2023 (in person)
- Polish Conference on Artificial Intelligence, 2023 and 2024. (in person)
- Advanced Language Processing ALPS, 2022. (online)
- NeurIPS, 2021. (online)
- CVPR, 2021. (online)
- Fair Medicine and Artificial Intelligence: Chances, Challenges, Consequences, 2021. (online)
- AutoML Fall School, 2021. (online)
- Eastern European Machine Learning Summer School, *Deep Learning and Reinforcement Learning*, 2020. (poster presentation, online).

OTHERS

Technical Committee (TC)

at the first Clinically-oriented and Responsible AI for Medical Data Analysis workshop at the MICCAI 2023

Reviewer of a papers sent to

- International Journal of Computer Assisted Radiology and Surgery
- IEEE Journal of Biomedical and Health Informatics
- ECAI
- ACL

Active participation

in obtaining grants

- xLungs (The National Centre for Research and Development)
- DeCoviD (Excellence Initiative – Research University against COVID-19)