Ignacy Kolton

PhD Candidate in Technical Computer Science, Jagiellonian University

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RESEARCH INTERESTS

Computer vision and foundation models for medical imaging, vision-language models, 3D representations of medical volumes

EDUCATION

PhD in Technical Computer Science 2026 – present
Jagiellonian University, Krakow, Poland
Doctoral School of Exact and Natural Sciences. Research on foundation models for multimodal medical data.

Master's in Computer Science 2024 – 2026
Jagiellonian University, Krakow, Poland
Focused on machine learning and computer vision, with involvement in research projects and publications.

Bachelor's in Computer Science 2021 – 2024
Jagiellonian University, Krakow, Poland
Developed a strong foundation in computer science and mathematics.

PUBLICATIONS

Ignacy Kolton, Wenxuan Li, Zongwei Zhou, Jarosław B. Ćwikła, Arkadiusz Sitek, Pedro R. A. S. Bassi, Szymon Płotka. **Diagnostic Loss: Asymmetric Supervision for Radiology Report Generation.** arXiv preprint arXiv:2610.30980, 2026.
arxiv.org/abs/2610.30980 · github.com/gmum/DLoss

Ignacy Kolton, Kacper Marzol, Paweł Batorski, Marcin Mazur, Paul Swoboda, Przemysław Spurek. **ReLAPSe: Reinforcement-Learning-trained Adversarial Prompt Search for Erased concepts in unlearned diffusion models.** arXiv preprint arXiv:2602.00350, 2026.
arxiv.org/abs/2602.00350 · github.com/gmum/ReLaPSe

Kacper Marzol, **Ignacy Kolton**, Weronika Smolak-Dyżewska, Joanna Kaleta, Marcin Mazur, Przemysław Spurek. **MedGS: Gaussian Splatting for Multi-Modal 3D Medical Imaging.** arXiv preprint arXiv:2509.16806, 2025.
arxiv.org/abs/2509.16806 · github.com/gmum/MedGS

PRESENTATIONS

Beyond Fluent Reports: Faithful Radiology Report Generation October 2026
Poster · ML in PL Conference 2026, Warsaw, Poland

EXPERIENCE

Research Group Member 2026 – present
GMUM, Jagiellonian University
Machine learning research group.

Software Engineer Internship 05.2024 – 11.2024
HERE Technologies
Refactored and tested legacy Java, Swift and C++ code, improving maintainability, memory usage and execution time.

GRANTS & AWARDS

ArtInCom Minigrant 2025
Excellence Initiative – Research University, Jagiellonian University
Research minigrant from the Artificial Intelligence Computing Core Facility (ArtInCom) supporting student-led research.

SKILLS

Programming: Python, C++
ML Frameworks: PyTorch, NumPy, pandas
Methods: Vision-language models, LoRA fine-tuning, diffusion models, Gaussian Splatting, reinforcement learning
Medical Data: 3D CT, MRI and ultrasound volumes, radiology reports
Tools: Git, Docker, Linux