

EDUCATION

- **Jagiellonian University** Kraków, Poland
PhD candidate in Technical Computer Science *Oct. 2022 – Jun. 2026*
 - Thesis topic: "Computer vision for autonomous machines"
 - First author of two CORE A* level papers within the first two years; current GPA 5.0.
- **Jagiellonian University** Kraków, Poland
Graduated with honors as Master of Computer Science *Oct. 2020 – Jun. 2022*
 - Specialization: Machine Learning; GPA 4.9; Co-authored a research paper.
 - Thesis: "ProtoMIL: Multiple Instance Learning with Prototypical Parts for Fine-Grained Interpretability".
- **Jagiellonian University** Kraków, Poland
Graduated as Bachelor of Computer Science – IT Analyst *Oct. 2016 – Jun. 2019*
 - Specialization: Theoretical Computer Science; GPA 4.0.
 - Focus on algorithms, formal methods, discrete mathematics and probability theory.
- **The August Witkowski 5th High School** Kraków, Poland
 - Finalist of *Polish Olympiad in Informatics (2016)*. *Sep. 2013 – May 2016*
 - First place in *Polish Electrical and Electronic Knowledge Olympiad* in ICT category (2016).

SELECTED PUBLICATIONS

- **AdaGlimpse: Active Visual Exploration with Arbitrary Glimpse Position and Scale.** Pardyl, A.; Wronka, M.; Wolczyk, M.; et. al. In European Conference on Computer Vision (**ECCV**) 2024.
- **Beyond Grids: Exploring Elastic Input Sampling for Vision Transformers.** Pardyl, A.; Kurzejamski, G.; Olszewski, J.; et. al. Preprint arXiv:2309.13353; In review for WACV 2024.
- **Active Visual Exploration Based on Attention-Map Entropy.** Pardyl, A.; Rypeś, G.; Kurzejamski, G.; et. al. In International Joint Conference on Artificial Intelligence (**IJCAI**) 2023.
- **CompLung: Comprehensive Computer-Aided Diagnosis of Lung Cancer.** Pardyl, A.; Rymarczyk, D.; et. al. In European Conference on Artificial Intelligence (ECAI), 2023.
- **ProtoMIL: Multiple Instance Learning with Prototypical Parts for Whole-Slide Image Classification.** Rymarczyk, D.; Pardyl, A.; Kraus, J.; Kaczyńska, A.; Skomorowski, M.; and Zieliński, B. In European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), 2022.

RESEARCH INTERESTS

- **Computer vision for embodied AI:** vision-guided autonomous agents in open world environments.
- **Human-like perception:** reasoning based on environmental cues and contextual information for exploration.
- **Explainable artificial intelligence:** interpretable machine learning models with human-understandable concepts.

WORK EXPERIENCE

- **IDEAS NCBR** Warsaw, Poland
PhD student researcher *Sep. 2022 – present*
 - Team: Zero-waste machine learning in computer vision; lead by Prof. Tomasz Trzcinski.
 - Researching vision transformer-based models for embodied AI, dedicated to efficient visual environment exploration and scene understanding (as part of PhD thesis).
 - Supervising junior researchers and interns, resulting in 2 successful applications to a PhD program.
- **Google** Zürich (remote), Switzerland
Software Engineering Intern *Jul. 2020 – Oct. 2020*
 - Worked with the YouTube Content ID team on improving content matching system.
 - Performed big data analysis to identify highly repetitive, yet non-distinctive video fragments on YouTube in order to optimise video matching subsystem improving its performance.
 - Designed an ML detector to reduce the number of false-positive Content ID early matches by over 82%.

- **Google** Zürich, Switzerland
Software Engineering Intern *Jul. 2019 – Sep. 2019*
 - Joined the Android Frameworks team working on the Android Operating System.
 - Implemented a new high-performance on-device binary logging solution for the Android Window Manager, utilizing compile-time Java code generation, enabling verbose analytics and zero overhead in production.
 - Designed and created an ADB Proxy for Winscope, a tool that enables developers to seamlessly debug Android window transitions using a web browser, providing direct access to Window Manager traces.
- **Google** London, UK
Software Engineering STEP Intern *Jul. 2017 – Sep. 2017*
 - Worked with the Android for Corp team (part of Android Enterprise).
 - Developed and launched a new security feature for the G Suite Mobile Management platform, enabling enterprise administrators to monitor and mitigate potentially harmful apps on corporate devices.

RESEARCH GRANTS

- **(primary investigator) National Science Center Preludium Grant:** Where to look next - guiding active visual exploration with internal model uncertainty.
- **(participant) National Science Center Opus Grant:** Deep Self-Organizing Neural Graphs.
- **(participant) Foundation for Polish Science Team-Net Grant:** Bio-inspired artificial neural networks.
- **(participant) National Centre for Research and Development Fast Track:** (in polish) X-rAI: Przeglądarka diagnostyczna dla radiologii z komputerowym wspomaganie wykorzystującym Sztuczną Inteligencję.

LEADERSHIP & ACTIVITIES

- **Student Government of the Jagiellonian University** Kraków, Poland
Vice-president of the Board *Sep. 2021 – Jun. 2022*
President of the Faculty Student Council *Feb. 2020 – Jul. 2021*
 - Elected representative, co-managing student organisation with over 500 000 USD yearly budget. Streamlined the project financing procedure, resulting in 29% increase in number of financed student projects.
- **Computer Science Students' Association at the Jagiellonian University** Kraków, Poland
Member of the Board; Software Developer & Network Administrator *Oct. 2017 – Oct. 2022*
 - Managed the work of the most successful student organization at the Faculty of Mathematics and Computer Science of the Jagiellonian University, increasing the participation by 60% up to 140 members.
- **TechSwarm 2015** Kraków, Poland
Team Leader; Software Developer *Aug. 2014 – Jul. 2015*
 - *Second prize in the 2015 European CanSat Competition* organized by the *European Space Agency*.
 - Built a miniature space probe model, capable of measuring various parameters of planet's surface and transmitting them to a receiving station.

TECHNICAL SKILLS

- **Machine Learning Frameworks:** PyTorch, Lightning, basics of TensorFlow and JAX
- **Machine Learning methods:** Transformers, Convolutional Neural Networks (CNNs), Reinforcement Learning (RL), Self-Supervised Learning (SSL), Foundation models, Vision LLM / VLM
- **Tools & Libraries:** NumPy, Scikit-learn, OpenCV, Matplotlib, Weights & Biases, Slurm
- **Programming languages:** Python, Java, C++, Kotlin, JavaScript, SQL, basics of CUDA and x86_64 assembly
- **Platforms:** Linux (Debian, Arch Linux, Gentoo), embedded systems (AVR, ARM)
- **Other:** LaTeX, Git, Bazel, Protocol Buffers, TCP/IP networking, RPC

LANGUAGES

- **Polish:** Native
- **English:** Advanced