Maciej ZAMORSKI, Ph.D.

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Experienced machine learning scientist, engineer and technical leader with over 8 years of academic and industry experience developing and deploying advanced Artificial Intelligence (AI) and Computer Vision (CV) systems. Proven track record in leading interdisciplinary teams, defining R&D strategiesand driving projects from research and prototyping to production deployment. Author and co-author of more than 10 peer-reviewed publications with over 200 citations and with research interests spanning 3D computer vision, generative modeling and medical imaging.

EXPERIENCE

OCT 2021 - PRESENT **HEMOLENS DIAGNOSTICS (PREV. LIFEFLOW)**
DEC 2023 - PRESENT *Head of AI*
OCT 2021 - OCT 2023 *Senior Machine Learning Engineer*

I lead AI & CV team of engineers and scientists in pioneering industrial research and innovation in advanced AI solutions for medical imaging and fluid simulations.

I drive the end-to-end lifecycle of AI projects — from conceptualization and strategic planning to execution and deployment — ensuring each project aligns with overarching corporate goals and yields tangible impact in healthcare. Leveraging **close collaboration with executive leadership**, I set short- and long-term research and development roadmaps, identify high-potential innovation areas and maintain seamless cross-functional coordination with clinical experts, product teams and external partners.

My responsibilities include **supervising research and development** of cutting-edge AI algorithms for medical imaging, keeping best practices in **data engineering and deployment of models** and working alongside IP and Regulatory experts in **preparation of patent filings** and documentation for **FDA & MDR certification process**.

Beyond day-to-day operations, I **nurture a culture of mentorship and professional growth**, guiding mid- and junior-level engineers toward excellence.

FEB 2019 - SEP 2022 **WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY**
Teaching Assistant

Prepared and taught bachelor-level courses on topics such as machine learning and modelling differential equations. Helped with **thesis supervision** of bachelor and master-level students.

AUG 2018 - APR 2021 **TOOPLOOX**
Machine Learning Researcher

Co-led and was involved in research projects that resulted in 3 major scientific publications, including **acceptance to ICML 2020**.

Led and co-led several commercial projects that included discovering client needs, performing feasibility studies, defining project scope for PoC and MVP milestones and conducting R&D work in areas of deep learning and computer vision.

FEB 2017 - JUN 2018 **ALPHAMOON** (ACQUIRED BY BOX)
Machine Learning Engineer

Involved in **journal-published research project** in bioinformatics & machine learning areas. In commercial projects worked on implementation, testing and documentation as well as providing reports to clients.

JUL 2016 - JAN 2017 **NOKIA**
Python Engineer

Worked in Test Automation team. Created tools to automate the job of manual testers, wrote & refactored Python libraries, management the SVN code repository.

JUN-SEP 2014 **NOKIA**
Embedded Systems Developer

As an intern I learnt about mobile network architecture, worked with technical documentation from Nokia and Texas Instruments and wrote source code in C and Assembly.

Education

Oct 2018 - Jun 2022	Doctorate studies in Machine Learning & 3D Computer Vision *Cum laude* **Wrocław University of Science and Technology**
Oct 2013 - Jun 2018	Engineer & Master studies in Computer Science **Wrocław University of Science and Technology**

Selected publications

Chojnacki, J., Gajowczyk, M., Teklak K., Konopczyński, T., **Zamorski, M.**, (2024). The comparison of 2D and 3D based models for the problem of plaque segmentation and coronary artery calcium scoring on non-contrast cardiac CT imaging. *MICCAI 2024 Workshop on Computational Biomechanics for Medicine*.

Pałachniak, J., Luniak, P., **Zamorski, M.**, Kierepka, M., Miller, K., (2024). Towards objective assessment of the accuracy of coronary artery segmentation. *MICCAI 2024 Workshop on Computational Biomechanics for Medicine*.

Zamorski, M., Stypułkowski, M., Karanowski, K., Trzciński, T., Zięba, M. (2022). Continual learning on 3D point clouds with random compressed rehearsal. *Computer Vision and Image Understanding (CVIU)*.

Stypułkowski, M., Kania, K., **Zamorski, M.**, Zięba, M., Trzciński, T., Chorowski, J. (2021). Representing point clouds with generative conditional invertible flow networks. *Pattern Recognition Letters*.

Spurek, P., Winczowski, S., Tabor, J., **Zamorski, M.**, Zięba, M., Trzciński, T. (2020). Hypernetwork approach to generating point clouds. *International Conference on Machine Learning (ICML)*.

Zamorski, M.*, Zięba, M.*, Klukowski, P., Nowak, R., Kurach, K., Stokowiec, W., Trzciński, T. (2020). Adversarial Autoencoders for Compact Representations of 3D Point Clouds. *Computer Vision and Image Understanding (CVIU)*.

Stypułkowski, M., **Zamorski, M.**, Zięba, M., Chorowski, J. (2019). Conditional Invertible Flow for Point Cloud Generation. *NeurIPS 2019 Workshop on Sets and Partitions*.

Klukowski, P.*, Augoff, M.*, **Zamorski, M.**, Gonczarek, A., Walczak, M. J. (2018). Application of Dirichlet process mixture model to the identification of spin systems in protein NMR spectra. *Journal of biomolecular NMR*.

Selected activity

Nov 2022	**ML in PL Conference** **Presented poster** "Continual learning on 3D point clouds with random compressed rehearsal".
Nov 2019	**ML in PL Conference (prev. PL in ML)** Gave the **oral presentation** "Adversarial Autoencoders for Compact Representations of 3D Point Clouds". **Co-conducted a full-day workshop** "Flow-Based Generative models" for 30 attendees as a part of one of the biggest Polish machine learning conferences.
Dec 2018	**PL in ML: Polish View on Machine Learning** **Co-conducted a full-day workshop** "Practical Aspects of Generative Models" for about 30 attendees as a part of one of the biggest Polish machine learning conferences.
2014, 2015, 2016	**TEDx Wrocław** Volunteer for TEDx Wrocław main events. Worked in an international group. Responsible for cooperating with the audio engineer and continuous service of a conference rooms sound systems.
Mar 2014 - Jul 2015	**AIESEC** Leader of the team organizing work & travel in Lower Silesia region for foreign student volunteers.

Skills

Programming:	Python – PyTorch, PyTorch Lightning, PyTorch Geometric, PyG, MONAI, ONNX, TensorRT, ITK, VTK, Pandas, Matplotlib, Plotly
Toolkit:	Linux, Docker, LaTeX, Bash, Git, SQL, HPC, Slurm
Cloud:	Google Cloud (GCP), Microsoft Azure, Amazon Web Services (AWS)
Languages:	Polish (Native), English (C1, 8.0 points IELTS Certificate)

I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process.