

Michał Tyrolski

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EDUCATION

University of Warsaw, Faculty of Mathematics, Informatics and Mechanics

M.Sc. Machine Learning (top 5% students) - graduated with honors

Warsaw, Poland

X 2021 - XII 2023

University of Warsaw, Faculty of Mathematics, Informatics and Mechanics

B.Sc. Computer Science (top 5% students)

Warsaw, Poland

X 2018 - VII 2021

Tadeusz Kosciuszko High School

Math/Physics/CS class - The Best Graduate Statuette

Gostynin, Poland

IX 2015 - VI 2018

PUBLICATIONS

What Matters in Hierarchical Search for Combinatorial Problems? (ICLR)

2024

- Accepted for ICLR 2024 Generative Models for Decision Making.
- We identify and widely evaluate key properties influencing hierarchical search.

Adjusting Planning Horizon with Adaptive Subgoal Search (ICLR 2023, top-5%, oral)

2023

- A first author; efficient RL search on low computational budgets using subgoals. (ArXiv link)
- First in Poland top-5% ML paper published at A* conference.

Enhancing Antigenic Peptide Discovery (ICLR 2023, MLDD workshop)

2023

- Improved MHC-I Binding Prediction and Methodology.
- Achieved better generalization properties than previous state-of-the-art.

Microsoft Machine Learning, AI and Data Science Conference (MLADS)

2022

- A first author of the paper related to explainable machine learning. Accepted. Internal
- A first intern in Microsoft Ireland with publication at MLADS.

Hierarchical Transformers Are More Efficient Language Models (NAACL 2022)

2021 - 2022

- Co-authored a paper with Google Research (ArXiv link).
- Improving efficiency in managing long sequences within the attention mechanism

SEMINARS

Adaptive Subgoal Search **Amii Artificial Intelligence Seminar**

University of Alberta

June 2023

Seminar of Juergen Schmidhuber's Group

KAUST

July 2023

EXPERIENCE

Ernst & Young

Warsaw, Poland

Senior AI Consultant IV

II 2025 - present

- Enhancing AI agents with advanced reasoning capabilities
- Empowering both internal and external services

DeepFlare

Warsaw, Poland

Deep Learning Researcher

X 2022 - II 2025

- Led a team to develop deep learning methods and foundation models for vaccine creation.
- Developed evaluation procedures, pipelines related to modeling, data investigation, designed algorithms, and performed experiments.
- Involved into the AI-enhanced vaccine discovery partnerships (Ceva Santé Animale and others), focusing on the identification of promising antigen candidates.

Microsoft

Dublin, Ireland

Data Scientist Intern

VII 2022 - X 2022

- Involved into designing methods, evaluation, experiments on explainable boosting machines.
- Accepted paper for Microsoft Machine Learning, AI, and Data Sciences Conference (1st author).

University of Warsaw

Teaching Assistant

Warsaw, Poland

X 2021 - III 2022

- **Database Theory** course, teaching a group of 18 undergraduate (computer science) students.

Nvidia

Deep Learning Intern

Warsaw, Poland

VII 2021 - X 2021

- Research in Distributed Deep Learning, Model Splitting, Big NLP models and **Model Parallelism**.
- Created a generic solution for the model splitting in TF2, achieving 50% better throughput.

Microsoft

Software Engineering Intern

Dublin, Ireland

IV 2021 - VI 2021

- Contributed to open-source C# library for building highly scalable distributed systems: **Omex**.
- Achieved better reliability, latency and tens of times less memory consumption.

Nvidia

Deep Learning Intern

Warsaw, Poland

VI 2020 - IX 2020

- Created **Triton Inference Server: Python Backend** written in low-level C++.
- Implemented automated CI/CD for deep learning. Boosted implementing CI pipeline by **500%**.

Samsung

Software Developer Intern AI/Computer Vision

Warsaw, Poland

VII 2019 - IX 2019

- Working on spatial mapping for augmented reality with depth cameras.
- Created algorithms for detecting objects with certain properties in 3D space.

LEADERSHIP

- Organizer of ML in PL Conference *III 2020 - X 2025*
 - **Co-Project Leader** ML in PL 2021, Leading **13** teams with **42** people ([website link](#))
 - Keynotes i.a. **Yoshua Bengio**; Poster Session, Contributed Talks, Discussions, WiML, 1k participants
 - Scientific Program Officer for editions 2020, 2022, 2025, Coordinator: 2023, 2024
 - Research Platform Coordinator 2023, 2024 ([platform link](#)). An online hub, aiming to connect B.Sc./M.Sc. students and research leaders in ML/AI.
- ML in PL: Machine Learning Summer School - Scientific Program Officer *2023, 2024*
- Board member of Machine Learning Society at University of Warsaw *III 2020 - X 2022*
 - **President** since V 2021
 - organizing reading group, workshops, lectures, hackathons and debates.
- Co-founder of PiGames - game development studio ([website link](#)) *2016 - 2018*
- Volunteer at Institute of Civic and Economic Freedom *2016 - 2018*
 - Coordinating local structures
 - Designing posters and organizing happenings