

PAWEŁ BALAWENDER

COMPUTER SCIENCE MAJOR

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EDUCATION

University of Warsaw

October 2020 – July 2025

- Bachelor of Computer Science (4.5 / 5.0, July 2023). Started my Master's in October 2023.
- Top 5 master's students to receive a scholarship for my research.
- Top 8 bachelor's students for a special course of study during the sophomore year.
- Thesis presented in Miami in November 2024 (accepted to EMNLP Findings 2024).
- The work is publicly available at <https://arxiv.org/abs/2311.16905>.

WORK EXPERIENCE

Optiver

Software Engineering Intern

Amsterdam (July 2024 – August 2024)

- Worked on a low-latency focused C and C++ codebase of the Automated Trading Systems team.
- Optimized an internal framework by improving thread synchronization and I/O buffering.
- Managed to get a 30% speedup in offline calculations taking as long as 6 hours to finish otherwise.
- Went through a two-weeks bootcamp in market making theory and HFT technology.

Goldman Sachs

Summer Analyst

Warsaw (July 2022 – September 2022)

- Ported SQL queries to Snowflake. Reduced execution time of one of them from 10 minutes to under a second.
- Deployed a monitoring application in Python using Docker, Kubernetes, and Terraform.
- Team leader for the Community teamwork volunteers.

University of Warsaw (European Research Council grant)

Junior researcher

(October 2022 – December 2023)

- Joined the TUGbOAT research group to fight misinformation in Twitter on Ukrainian refugees in Poland.
- In a team of 4, implemented a deep-learning based system which detects new harmful tweets on Twitter and generates responses to them.
- Presented part of the work as my bachelor thesis. It received a score of 5/5.
- The work has been accepted to EMNLP Findings 2024 and presented in Miami.

COMPETITIONS AND PERSONAL PROJECTS

Multilayer Perceptron with Backpropagation in Numpy

(November 2022)

- Implemented a neural network from scratch in Numpy for my Deep Neural Networks course.
- The code contains extensive documentation, especially the backpropagation part.
- For the details, please take a look at: <https://github.com/eerio/mlp-checkpointing>

Award from the Polish Ministry of Education

(July 2020)

- Received a personal award from the Ministry, awarded to the most accomplished students of the year.

European Union Contest for Young Scientists

(October 2019 - June 2020)

- In a team of 2, designed a power-management system for Unmanned Aerial Vehicles.
- Developed bare-metal drivers in C and Assembly for an STM32 microcontroller.

Operating System for the Cortex-M0 microprocessor

(November 2018 - March 2019)

- Got 1st place in Poland in MeetIT Foundation's competition.
- Designed a minimalistic operating system supporting FAT file system and threading.
- Wrote a custom SDHC card driver using only the official standard as documentation.

SKILLS

Main Skills C, C++, Python, Linux, Data analysis

Side Skills Java, Haskell, SQL, PyTorch

Languages Native in Polish; C1 in English (supported by IELTS band 8)