

# ADAM DERYŁO

☎ +48 698 608 344 ✉ [a.m.derylo@gmail.com](mailto:a.m.derylo@gmail.com) 🔗 [linkedin.com/in/adamderylo](https://linkedin.com/in/adamderylo) 🐙 [github.com/aderylo](https://github.com/aderylo)

## EDUCATION

### Warsaw University

Oct. 2020 – Ongoing

*Bachelor of Science in Computer Science*

*Warsaw, Poland*

- Top rated CS undergraduate program in Poland according to QS ranking.
- 1st-year modules: Functional Programming, OOP, C, Introduction to AI, Linear Algebra.
- 2nd-year modules: Adv. Algorithms, Databases, Computer networks, Web Apps, Statistics, NLP.
- 3rd-year modules: Distributed systems, Concurrency theory, Security of computer systems.

## EXPERIENCE

### Goldman Sachs

Jun. 2022 - Aug. 2022

*Summer Analyst | Redis, Java, Procmon, Golang*

*Stockholm, Sweden*

- Global reconciliations team, daily processing of 80+ mln trade & position data entries.
- Collaborated on optimizing caching performance and reliability of data loading processes.
- Worked on extending database performance limits with intelligent cache priming based on Change Data Capture.
- Developed Redis cache monitoring tool suite to speed up emergency debug and development cycle.

### ReSpo.Vision

Jul. 2021 - May. 2022

*Software Engineer Intern | Python, Postgre, Git, SQL, Pytorch*

*Warsaw, Poland*

- 40+ sprints under the Scrum development framework in a rapidly growing team.
- Worked on a back-end implementation of a betting hints generator that withstood 100k API calls daily.
- Created a deep learning NLP module using cutting-edge architectures such as BERT.
- NLP module tackled the problem of context-dependent noun declination in Slavic languages.

### Bain & Company

Mar. 2021 - Apr. 2021

*Spring Intern | Nielsen, Ipsos, Bain's overlay for MS Office*

*Warsaw, Poland*

- Supported a consulting team in the area of wood market data analysis.
- Collaborated on a business case under the supervision of a dedicated mentor.

## PROJECTS

### Bachelor thesis with NVIDIA | C++, CUDA, Python

Oct. 2022 - Present

- GPU acceleration of image decompression in machine learning workflows.
- Constructing a CUDA kernel to enhance the decoding of data encoded using the RICE algorithm.
- Project requested by NASA data scientists that use FITS data format compressed with RICE algorithm.
- Gained hands-on experience with CUDA virtual memory management, under the guidance of NVIDIA employees.

### Distributed alerting system | Grpc, Google Cloud Platform, Python

Nov. 2022 - Jan. 2023

- Developed scalable microservice system for monitoring services and running complex alerting routines.
- Utilized GRPC, PubSub queues, Cloud SQL and other tools to satisfy SLO requirements.
- Project supervised by Google employees.

### Goldman Sachs EMEA 2022 Hackaton | Python, Flask, Git

Nov. 2022

- Achieved first place during a challenging 24-hour hackathon.
- Designed and implemented a mock website aimed at enhancing Goldman Sachs' recruitment efforts.
- Implemented a stock market simulation game within the tight time constraints of the hackathon.
- Contributed to the development of a 3D render for a physical token with a link to the portal.

### N-dimensional labyrinth solver | C, Valgrind, Cmake, Git

Jun. 2022

- Developed a high-performance traverser for multidimensional mazes/large graphs.
- Utilized most memory efficient solution by incorporating 2-bit BFS algorithm.
- Implemented arbitrary large integer type to facilitate enormous labyrinths and showcase memory efficiency.

### Operating system process scheduler | C, Qemu, Make, Git

May. 2022

- Implemented multiple processes scheduling algorithms in a Minix microkernel operating system.
- Employed Qemu, and Rsync for faster development iterations.

### Concurrent Unix directory | C, Pthreads, Helgrind, Cmake, Git

Jan. 2022

- Implemented UNIX file directory system, which allowed for concurrent creation, deletion and movement of files.
- Utilized tailored-made readers-writers lock with Latest Common Ancestor writer locking.

### Enhancing Splay Tree for pattern search | C++, Catch2, Cmake, Bash, Git

Dec. 2021

- Developed an algorithm for efficient search of patterns in DNA sequence.
- Utilized a splay tree data structure enhanced with attributes updated through lazy propagation.

## EXTRACURRICULAR

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**Member**, Bain & Company Champions Class 2023

**1st Place**, Goldman Sachs EMEA Engineering Hackaton 2022

**2nd Place**, PSDC 2020 debating championship, preliminary stage to World Schools Debating Championship.

**Laureate**, 8/1000+ in the 31st National Philosophy Olympiad

## SKILLS

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**Programming Languages:** Python, Java, C/C++, JavaScript, R, Ocaml, Go, SQL

**Technologies:** Git, Fedora/Ubuntu/Debian, Jira, Redis, Docker, Pydantic, React, Cloud Run

**Natural languages:** English (C2), Polish (Native), Spanish (B1)