

Yahya Jabary

www.github.com/sueszli

jabaryyahya@gmail.com

Austrian/EU citizen

www.yahya.tech

+43 650 4012392

Skills

German (native), English (fluent)

Dev: Python, Java, JavaScript, C/C++, CUDA

Data: PyTorch, JAX, Faiss, PostgreSQL, R, Spark MLlib

Ops: Docker, AWS (EC2, S3, Lambda), gRPC/Protobuf, Kafka

Education

MSc, Data Science · TU Wien

2024 – present

BSc, Computer Science · TU Wien

2019 – 2023

Gifted Program (NCoC), Mathematics · University of Vienna

2017 – 2019

Associate Degree (HAK), Economics & Finance · Austrian Economic Chamber

2016 – 2019

Experience

Research Assistant, ETH Zurich x TU Wien

06.2024 – present

• Work in Progress

Research Assistant, University of Waterloo

09.2023 – 02.2024

- Contributed to a low-overhead (2%) system call intercept/replay system for multi-core applications.
- Automated containerization of C apps using FreeBSD jail primitives and Bash scripts for reproducibility.
- Designed and benchmarked a sentiment analysis and ANN-based retrieval system for code and reviews.

Trading Software Engineer, Erste Bank

04.2023 – 10.2023

- Built a low latency CRDT-based database proxy for real-time data synchronization across trading desks.
- Significantly reduced network overhead for pricing engine through request batching and brokerless messaging.
- Conducted security audits, identifying and addressing high-severity data breach vulnerabilities.

Research & Teaching Assistant, TU Wien

02.2021 – 09.2023

- Researched JVM memory and control flow visualization to enhance profiling and debugging.
- Authored comprehensive lecture notes on complexity theory, benefiting over 800 students each semester. (186.866)
- Developed an open-source visualizer for OS concepts, such as process scheduling mechanisms. (188.909)
- Supervised and evaluated full-stack software projects using Spring-Boot and Angular. (188.909, 180.456)
- Independently instructed Java programming lab groups of 5 students during summer courses. (185.A91, 180.771, 185.A82)

Research Engineer, FH Technikum

02.2022 – 03.2023

- Wrote 13 kLoC of Python for a distributed IoT system on top of MQTT for inter-device communication.
- Optimized build times by 10x for Docker images by allowing precompiled dependencies for development.
- Implemented energy usage forecasting models for an adaptive heating system, using time series analysis.

Intern, Andamp

09.2022 – 10.2022

- Delivered key usability improvements to the hiring platform built with Next.js and Firebase cloud functions.

Quantitative Developer, Seavan Trading

03.2020 – 01.2022

- Built a trading strategy backtesting framework, measuring predictive accuracy and robustness of models.
- Optimized execution order in event queue to eliminate congestion in the high-frequency trading system.
- Audited legacy C codebase and identified critical race conditions that lead to data corruption and loss.

Volunteering

Organizer, Serlo

06.2018 – 12.2018

- Gathered local author community for maths education content, reaching around 1.2 million visitors/month.

Founder, MatheMatura

10.2017 – 12.2018

- Launched a non-profit web service streaming mathematics lessons for economically disadvantaged students.
- Secured government funding by impressing an expert jury, ensuring one year of sustained operations.

Intern, Maker Austria

08.2017 – 09.2017

- Reverse engineered CNC machine driver software to enable operation with custom 4-axis milling machine.

Projects

[matchy](#)

Real-time speed dating web app. Pitched at HackZürich. Reached 200+ users in 3 months.

[citeq](#)

Course paper: Large scale sentiment analysis of citations and their correlation with impact.

[vecdb-bench](#)

Course paper: Vector DB benchmarking on scraped and mutated OSS code embeddings.

[query-queen](#)

Postgres query execution plan analysis and optimization leveraging Relational Algebra.

[spring-security](#)

Main contributor to 6.1.2 release. Bugfix for JWT tokens in OAuth 2.0 resource server.

[mailservice](#)

Mail service with DNS, opportunistic encryption, UDP broadcasts for monitoring.

[osue](#)

High performance, RFC-7230 compliant, HTTP client and server written in modern C.

Certificates

TOEFL iBT English Certificate

2022

License for regulated businesses, Austrian Economic Chamber

2019

Entrepreneurial Skills Pass (ESP), CSR Europe

2019

Awards

Direct admission to PhD program, University of Waterloo (declined)

2023

Mathematics International Master's Award of Excellence M-IMAE (\$12,500)

2023

Graduate Research Studentship GRS (\$23,081)

2023

Research Scholarship, TU Wien Institute of Logic & Computation (€1,200)

2021