Yahya Jabary

github.com/sueszli · yjabary@ethz.ch · Austrian/EU citizen
people.ee.ethz.ch/~yjabary · +43 650 4012392

Skills

German (native), English (fluent)

Dev: Python, Java, JavaScript, C/C++, CUDA
Data: PyTorch Lightning, JAX, PostgreSQL, Neo4j, Spark
Ops: Docker, AWS, gRPC/Protobuf, Kafka

Experience

Google, *GDG Lead* — Vienna, Austria | 08.2024 – present
· Founded Austria's first academic Google Developer Group; a non-profit machine learning community. [link]

ETH Zurich, *Research Assistant* — Zurich, Switzerland | 07.2024 – present
· Led research on alignment and interpretability of vision models, resulting in a top-tier submission.
· Wrote 16 kLoC of PyTorch code and beat an state-of-the-art adversarial robustness technique by 5% on CIFAR.
· Parallelized model training and reached speedups of up to 5x using Apptainer CUDA containers and Lightning.

University of Waterloo, *Research Assistant* — Ontario, Canada | 09.2023 – 02.2024
· Built and benchmarked a single-stage dense retrieval system for large-scale code and sentiment analysis.
· Collaborated on a 2%-overhead call intercept/replay system for multi-core applications written in C.
· Admitted to direct fast-tracked BSc to PhD program based on research performance.

Erste Bank, *Trading Software Engineer* — Vienna, Austria | 04.2023 – 10.2023
· Built a low latency CRDT-based database proxy for real-time data synchronization across trading desks.
· Reduced network overhead for model inference through request batching and brokerless messaging.
· Identified and mitigated a high-severity data breach vulnerability in production through security audits.

TU Wien, *Research Assistant & Teaching Assistant* — Vienna, Austria | 02.2021 – 09.2023
· Built a semantic neural compression benchmark suite for low-bandwidth satelite data transmission.
· Authored algorithms lecture notes; built OS process scheduling and JVM memory management visualizers.
· Independently instructed in 5 graduate and undergraduate courses reaching 5,000+ students over 2 years.

FH Technikum Wien, *Research Engineer* — Vienna, Austria | 02.2021 – 03.2023
· Wrote a 13 kLoC sensor data processing engine by extending CPython for real-time data analytics.
· Developed energy consumption forecasting models using ARIMA, achieving an average accuracy of 90%.
· Optimized build times by 10x for Docker images by allowing precompiled dependencies for development.

Andamp, *Intern* — Vienna, Austria | 09.2022 – 10.2022
· Delivered key usability improvements to web app built with Next.js and Firebase cloud functions.

Serlo Education, *Intern* — Munich, Germany | 06.2018 – 12.2018
· Coordinated local author teams to create math content, reaching over 1.2 million monthly visitors.

Maker Austria, *Intern* — Vienna, Austria | 08.2017 – 09.2017
· Reverse engineered a 4-axis CNC machine's driver software, showcased at the Vienna Maker Faire.

Projects

Jabary, Y., Plesner, A., Kuzhagaliyev, T., & Wattenhofer, R. (2024). Seeing Through the Mask: Rethinking Adversarial Examples for CAPTCHAs. [pdf] [code]

matchy — Real-time social web app; pitched at HackZurich; reached 200+ users in 3 months. [code] [demo]
self-ensembler — Zero-cost adversarial robustness through ensembling of intermediate representations. [code]
mailservice — Mail service with DNS, opportunistic encryption, UDP broadcasts for monitoring in Java. [code]
osue — RFC-7230 compliant HTTP client and server in modern C. [code]
julia-gw — Julia set fractal renderer with CUDA and OpenMP acceleration. [code]

Education

TU Wien, Master's Degree · *Data Science* — present
TU Wien, Bachelor's Degree · *Computer Science* — 2023
WKÖ, Associate Degree / HAK · *Finance* — 2019

ETH Zurich, Master's Thesis and Project Studentship (top 5 globally) — 2024
EPFL, Summer Research Institute SURI in ML Security (top 20 globally) — 2024
University of Vienna, Gifted Program in Mathematics NCoC (top 50 nationally) — 2017

Awards

Mathematics International Master's Award of Excellence M-IMAE ($12,500) — 2023
Graduate Research Studentship GRS ($23,081) — 2023
Logic & Computation Institute of TU Wien, Research Scholarship ($1,000) — 2021
Austrian Government, National Maker Competition Prize (€3,000) — 2018