

Serhan YILMAZ

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EDUCATION

Computer Science — *Bachelor of Science*

SEP 2021 - JUN 2025

Sabanci University

cGPA: **3.62/4**

- **Relevant Coursework:** Machine Learning, Digital Image Processing, Linear Algebra, Statistics, Discrete Math, Algorithms, Data Structures, Advanced Programming, Operating Systems, Database Systems
- Ranked **top 0.02%** among 2.9 million students in the National University Entrance Exam.

WORK EXPERIENCE

Carnegie Mellon University — *Research Assistant*

Pittsburgh, PA (Remote) | DEC 2023 - PRESENT

- Working with Prof. Kemal Oflazer on developing advanced question generation and paraphrasing algorithms.
- Employing transfer learning techniques to fine-tune **T5 and BERT** models for semantic understanding in paraphrasing.
- Achieved **91% accuracy** in generating high-quality, diverse research questions from input data.
- Evaluated generated questions using metrics like BLEU and METEOR, scoring in the **top 10%** compared to existing benchmarks.

Yapi Kredi Bank — *NLP R&D Engineering Intern*

Istanbul, Turkey | OCT 2023 - PRESENT

- Improving document interpretation algorithms with OCR-free **Donut Transformers**.
- Fine-tuned **BERT and BERTurk** language models, cutting annotation effort through transfer learning techniques.
- Worked with cross-functional teams to translate business requirements into effective NLP solutions.

kAi Sabanci — *Club Founder/President*

Istanbul, Turkey | MAR 2023 - PRESENT

- Founded, led, and grew kAi Sabanci, Sabanci University's AI and ML club, attracting **600+ members with 80% participation rate** in under 1 year. Got kAi to become the **first** member of the **NVIDIA Student Network** in Europe.
- Organized workshops and served as a voluntary TA, delivering sessions from NVIDIA DLI in Gen AI, NLP, Conversational AI, Machine Learning, Deep Learning and CUDA with instructors from around the world.
- Developed and managed several key projects in collaboration with academic faculty including the [kAi Sabanci website](#), our [RAG-enabled Chatbot -ChatSU-](#) campus modeling using [NeRF for Omniverse](#) and [cat identification with Jetson Nano](#).
- Organized panels on the AI revolution and transformation across the industry and academia, with notable guests from Stanford, Caltech, NVIDIA including **Simon See**. Held watchparties and gatherings for international developer conferences including **GTC**.
- **Selected for the NVIDIA Student Spotlight series** for outstanding perseverance, dedication and achievement.

EPFL Lausanne — *Summer@EPFL Intern*

Lausanne, Switzerland | JUN 2023 - SEP 2023

- Started the [Project Charisius](#). Optimized gradient aggregation functions using PyTorch and CUDA to work up to **2200%** faster.
- **Published the charisius library**, for accelerated Statistics and Distributed ML applications, up to **96%** reduction in the runtime.
- **Created 2 webpages:** the documentation of the library and another one with Flask backend to publish benchmarking leaderboards.

Sabanci University — *Undergraduate Teaching Assistant*

Istanbul, Turkey | SEP 2022 - JAN 2023

- Wrote homework assignments for students and held weekly recitation and office hours.

Boston University — *Undergraduate Research Assistant*

Boston, MA (Remote) | JUN 2022 - SEP 2022

- Studied Threat Modeling and Component Design for large-scale server systems under the supervision of Prof. Rabia Tugce Yazicigil.
- Developed a tool using C++, providing up to **336** different combinations to design secure servers for resource-intensive applications.

Pharus Tech — *Intern*

Stockholm, Sweden (Remote) | JUL 2020 - SEP 2020

- Explored, visualized and processed data from the ESCO dataset, including **3008** occupations and **13890** skills.

Koc University — *Undergraduate Research Assistant*

Istanbul, Turkey | JUN 2020 - JUL 2020

- Worked with Prof. Hakan Urey to train a machine learning model on a dataset of **600** retinal images for cataract detection.

AWARDS

NVIDIA — *NVIDIA Student Spotlight*

MAR 2023 - PRESENT

- Selected for the NVIDIA Student Spotlight series for outstanding perseverance, dedication and achievement.

Sabanci University — *Sakip Sabanci Award for Outstanding Success*

SEP 2022 - PRESENT

- Ranked **top 4%** among the students in my term.

The Royal Swedish Academy of Engineering Sciences — *Innovation in Crisis*

MAY 2020 - PRESENT

- Young Innovation in Times of Crisis Award for us, team United in Crisis, ranking in the **1st place** among all projects. For developing an algorithm to match workers and employers in the Covid-19 outbreak.

The New York Academy of Sciences — *Membership Award*

SEP 2019 - PRESENT

- For admission into "The Junior Academy" program with an acceptance rate of **8%**.

SKILLS

- **Languages & Tools:** Python, Java, Javascript, HTML/CSS, C, C++, Docker, Linux, AWS, MongoDB
- **Libraries:** PyTorch, TensorRT, JAX, PyTorch Lightning, TensorFlow, OpenCV, CUDA, NumPy, Pandas, Keras