Serhan YILMAZ

✉ serhan.yilmaz@sabanciuniv.edu | 📞 +90 (543) 798 81 34 | 🔗 yilmaz-serhan | ⌨ serhanylmz | 🌐 serhanyilmaz.org

EDUCATION

Computer Science — *Bachelor of Science* <div align="right">SEP 2021 - JUN 2025</div>
Sabanci University <div align="right">cGPA: **3.62**/4</div>
- ***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.
- Achieving **91% accuracy** in generating high-quality, diverse research questions from input data.
- Evaluating generated questions using the BLEU and METEOR metrics, 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-tuning **BERT and BERTurk** language models, cutting annotation effort through transfer learning techniques.
- Working with cross-functional teams to translate business requirements into effective NLP solutions.

kAi Sabanci — *Club Founder/President*   *Istanbul, Turkey* | MAR 2023 - PRESENT
- **Founding, leading, and growing** 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 **founding member** of the ***NVIDIA Student Network***.
- Organized workshops and served as a **voluntary TA**, delivering sessions from the **NVIDIA DLI** in **Gen AI, NLP, Conversational AI** with **Riva**, **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* <div align="right">MAR 2023 - PRESENT</div>
- Selected for the NVIDIA Student Spotlight series for outstanding perseverance, dedication and achievement.

Sabanci University — *Sakip Sabanci Award for Outstanding Success* <div align="right">SEP 2022 - PRESENT</div>
- Ranked **top 4%** among the students in my term.

The Royal Swedish Academy of Engineering Sciences — *Innovation in Crisis* <div align="right">MAY 2020 - PRESENT</div>
- Received the Young Innovation in Times of Crisis Award as team United in Crisis, ranking in the **1st place** among all projects. Developing an algorithm to match workers and employers in the Covid-19 outbreak.

The New York Academy of Sciences — *Membership Award* <div align="right">SEP 2019 - PRESENT</div>
- Admitted into "The Junior Academy" program with an acceptation rate of **8%**.

SKILLS

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