

Baturay Kafkas

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Education

Hacettepe University

Aug 2024 – Present

Bachelor of Science in Electrical and Electronics Engineering, GPA: 3.80/4

Experience

Student Assistant

Mar 2026 – May 2026

Department of Electrical and Electronics Engineering, Hacettepe University

- Helped students debug their code, conveyed conceptual knowledge about C programming language.

Academic Peer

Oct 2025 – Dec 2025

Sustainable Teaching and Learning Center, Hacettepe University

- Reached out to 315+ students faculty-wide.
- Delivered 7 university calculus problem-solving sessions with a total attendance of 115.
- Created two comprehensive exam solution manual books of 275 pages by means of LaTeX.

Projects

Multistage Audio Amplifier

May 2026 – May 2026

- Designed, simulated, and fabricated a discrete multistage audio amplifier using a BJT buffer, a passive equalizer (680 Hz —13.2 kHz), and a MOSFET gain stage without operational amplifiers.
- Validated frequency response through LTspice simulations and breadboard prototyping, utilizing a trimpot for localized gain optimization prior to final assembly on pertinax.

Research: Effect of Coronavirus Disease on Lung Capacity | *Spirometry*

Oct 2022 – Jan 2023

- Conducted research for and submitted to the 2204-A High School Students Research Projects Competition held by the Scientific and Technological Research Council of Türkiye (TÜBİTAK), aiming to find the effect of the disease on lung capacity.
- Related the disease and lung capacity using the spirometer device, plotting respiration graphs by examining 29 people.
- Compared Tidal Volume (TV), Inspiratory Reserve Volume (IRV), Expiratory Reserve Volume (ERV), Forced Vital Capacity (FVC), Total Lung Capacity (TLC) values obtained from the examinations.
- Inferred that participants who recovered from the disease took in less air when taking a deep, forced breath, and therefore, only the IRV values confirmed the hypothesis.

Skills

Languages: Turkish (native), English (upper-intermediate), French (pre-intermediate)

Programming Languages: Lua, C, Lua

Markup Languages: LaTeX, HTML

Computer Programs: Xilinx ISE, Dev-C++, LTspice

Activities

- Published *Learning Lua Programming Language Syntax* (Sep 2023), reaching 14.0K+ views.
- Published *Basic Data Types in Programming and Their Usage Areas* (Dec 2023), reaching 2.0K+ views.
- Attended Roketsan CAMPU Program (Learning & Development Camp for Engineers) (Jul-Aug 2026).