# Baturay Kafkas

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## EDUCATION

**Hacettepe University** *Aug 2024 – Present*
Bachelor of Science in Electrical and Electronics Engineering, GPA: **3.78/4**
- Achieved the highest GPA among the classmates.

**Private Zafer College** *Aug 2020 – Jun 2024*
High School of Science, GPA: **98.89/100**.

## PROFESSIONAL EXPERIENCE

**Academic Peer** *Oct 2025 – Present*
Hacettepe University
- Taught 60+ engineering students calculus on campus within the syllabus under the Academic Peer Support Programme.
- Solved each question of the math exams held in the past using LaTeX and turned them into a book of 275 pages.

## PROJECTS

**Research: Effect of Coronavirus Disease on Lung Capacity** | *Spirometry* *Oct 2022 – Jan 2023*
- Conducted research for 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.

**Computer Simulation: Smart Farming System** | *Lua, Roblox* *Oct 2022 – Jan 2023*
- Designed a system to simulate a greenhouse application for the 2204-A competition.
- Built a client-server architecture to manage user interactions and data flow, demonstrating principles of control systems.
- Utilized the physical constraints provided by the engine to handle the mobile components.

**Developer Tools** | *Lua, Roblox*
- Developed a plugin for programmers seeking the data of their code.
- Developed a plugin to adjust the borders of user interface objects for proper scaling.

## SKILLS

**Languages**: Turkish (native), English (upper-intermediate), French (pre-intermediate)
**Programming Languages**: Lua, C, Luau
**Markup Languages**: LaTeX, HTML

## TECHNICAL WRITING

Learning Lua Programming Language Syntax (*Sep 2023*)
- Published an in-depth article about the Lua syntax in Turkish, reaching 13.9K+ views.

Basic Data Types in Programming and Their Usage Areas (*Dec 2023*)
- Published an article about the Lua data types in Turkish, reaching 1.9K+ views.