# 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 40+ 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 two-volume book consisting of around 250 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.