

# Yusuf Kayra Gül

*Undergraduate Physics Student*

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## Education

- 2023–Present **B.S. in Physics**, *Bilkent University*, Ankara, Turkey, CGPA: 3.84/4.0
- Status: High Honour Student (4 Semesters).
  - Relevant Coursework: Electromagnetic Theory I, Quantum Mechanics I, Numerical Methods in Physics, Modern Physics, Waves and Optics, Engineering Mathematics I/II, Advanced Calculus for Applications in Physics, Probability and Statistics, Materials Science and Technology, Introduction to Programming in Python, Calculus I/II, General Physics I/II, Principles of Chemistry I/II.
- 2019–2023 **High School Diploma**, *Sümer Science High School (Sümer Fen Lisesi)*, Kayseri, Turkey

## Scholarships & Awards

- 2023–Present **Bilkent University Comprehensive Merit Scholarship**, *Bilkent University*, Ankara, Turkey
- Awarded upon university admission for ranking 3,369th among roughly 3 million candidates in Türkiye's National University Entrance Exam (YKS).
- 2023–Present **TÜBİTAK 2205 Undergraduate Scholarship**, *TÜBİTAK (The Scientific and Technological Research Council of Turkey)*, Ankara, Turkey
- Awarded by TÜBİTAK for the mentioned achievement in YKS.
- 2024–Present **TOG Bezmen Science Scholarship**, *TOG (Toplum Gönüllüleri Vakfı – Community Volunteers Foundation)*, Turkey
- Granted for maintaining GPA above 3.50 in Physics.

## Projects

- 2020 & 2021 **Teknofest UAV Competition (Team SÜMERİHA)**, *Inter High School, Rotary Wing Category Finalist*, Turkey
- Served as the team pilot and collaborated on the design, manufacturing, and testing of a rotary-wing UAV. Designed UAV chassis using SOLIDWORKS.
  - Obtained a Type IHA-1 Sportif/Amateur Drone Pilot License issued by the Directorate General of Civil Aviation (SHGM).
  - Achieved finalist status for two consecutive years (2020 and 2021) in the Rotary Wing Category.

2024–2025 **Observation of Black-body Radiation and Flame Emission Spectra of Alkali Metals by Using Visible Light Spectroscopy**, *Modern Physics Course Project*

- Successfully constructed a home-made visible light spectrometer to measure black-body radiation of a tungsten filament and flame emission spectra of Li, K, and Na with  $\pm 5$  nm precision.
- [View Report on GitHub](#) | [Watch Demonstration on YouTube](#)

2025–2026 **Vibration Analysis of a Loudspeaker via Michelson Interferometer**, *Waves and Optics Course Project*, **Best Project Award Winner**

- Built a modified Michelson interferometer with a loudspeaker-mounted mirror to measure vibration frequencies through interference pattern modulation.
- Acquired high rate photodetector data using Arduino and extracted vibration frequencies via FFT-based signal processing.
- [View Report on GitHub](#) | [Watch Demonstration on YouTube](#)

## Extracurricular Activities

2025–Present **Board Member**, *Bilkent Physics Society*, Bilkent University

- Co-organized academic seminars, social events, and outreach programs for physics students.

2025–Present **Editor**, *Bilkent Science Literacy Society*, Bilkent University

- Currently reviewing and fact-checking senior-level articles about physics.
- Collaborated with other writers and designers to produce content.

## Skills

Languages Turkish (Native), English (Fluent – C1)

Programming Python (NumPy, SciPy, QuTiP, Matplotlib), MATLAB, Arduino

Software MS Office Suite, LaTeX, SOLIDWORKS (Beginner), Theremino Spectrometer, Tracker Video Analysis and Modeling Tool

Licenses & Certifications **Type IHA-1 Sportif/Amateur Drone Pilot License** – Directorate General of Civil Aviation (SHGM).

**PCAP: Programming Essentials in Python** – Cisco Networking Academy® & MoNE (Ministry of National Education), June 2020.

**Akıllı Tekno Digital Competence Certificate** – Ministry of Industry and Technology (DRVerified Platform), issued on March 4, 2024. [View Credential](#)

**Innovation and Entrepreneurship Competence Certificate** – Ministry of Industry and Technology (DRVerified Platform), issued on April 3, 2024. [View Credential](#)

**YGA Zirvesi 2025 Participation Certificate** – Young Guru Academy (YGA), December 2025. – Credsverse Platform. [View Credential](#)