

# Kayra Sarı

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## EDUCATION

### TED Ege College

GPA: 99,98. LGS: Top 0,15%

- Awarded 80% Merit-Based Scholarship for academic excellence.
- Awarded the Ministry of National Education Certificate of High Distinction.

Aydin, Turkiye

Sep. 2022 – June 2026

## EXPERIENCE

### Engineering Intern

Jan. 2026

AZR Engineering

Izmir, Turkiye

- Collaborated on innovative manufacturing and product design processes, transitioning theoretical engineering concepts into practical industrial applications.
- Assisted in end-to-end engineering workflows to gain a comprehensive understanding of the product development lifecycle.
- Addressed manufacturing challenges within a professional environment by applying mechanical engineering principles to live production tasks.

### Engineering Intern

Aug. 2025 - Sep. 2025

UKASIS A.S.

Izmir, Turkiye

- Executed tasks within precision manufacturing workflows, ensuring all outputs met high-standard industrial production techniques.
- Gained hands-on experience in Quality Control, monitoring production phases to ensure strict adherence to technical specifications.
- Analyzed mechanical engineering principles in an industrial setting to maintain quality standards across complex hardware components.

## PROJECTS

### CommunicaTED | Particle Physics, Python, Data Acquisition

Nov. 2024 – March 2025

- Proposed and designed a novel telecommunication system utilizing the natural flux of atmospheric cosmic ray muons for binary data transmission.
- Engineered a modulation system using Helmholtz Coils to generate a 0.119T magnetic field, achieving a calculated 1.106cm muon deflection over a 4-meter path.
- Developed a Python-based simulation to calculate cyclotron motion radii and deflection drifts across varying momentum distributions.
- Designed a binary readout system using scintillators and Threshold Cherenkov detectors to veto hadron contamination and ensure signal accuracy.

### Excalibur WMI Driver | C, Linux Kernel, WMI, Git

Aug. 2025 – Present

- Developed a custom Linux kernel module to enable hardware feature controls on Excalibur laptops.
- Implemented low-level communication between the GNU/Linux OS and hardware firmware via the Windows Management Instrumentation interface.
- Published as an open-source project on GitHub, managing version control and kernel compatibility.

### International Masterclass in Particle Physics | IPPOG / CERN

April 2025

- Selected to participate in an intensive program focused on experimental particle physics and data analysis.
- Performed hands-on analysis of real Large Hadron Collider data to identify elementary particles and calculate physical properties.

## TECHNICAL SKILLS

**Tools & Programming:** AutoCAD, MATLAB, Simulink, C, Python, Javascript, HTML/CSS

**Industry Knowledge:** Quality Control, Manufacturing Processes, Innovative Manufacturing

**Physics & Research:** Particle Physics, Experimental Design, Data Visualization, Data Analysis, Statistical Algorithms

**Language:** IELTS Academic 8.5, TELC Deutsch A2