

Yunus Emre KAYRA

📍 Izmit, Kocaeli, Turkey ✉ yunusemrekayra7@gmail.com ☎ 05302478108 📱 in/yunus-emre-kayra 🌐 github.com/YEK-Kayra

SUMMARY

I am a third-year Mechatronics Engineering student at Kocaeli University. Throughout my university journey, I have translated my theoretical knowledge into practical experience through various projects and laboratory work. My focus has been on embedded systems and microcontroller programming, particularly working with PIC16 and STM32 microcontrollers, which has given me a deep understanding of this field.

I was part of the embedded software team at the TAISAT Model Satellite Teknofest Team, where I worked on basic to intermediate embedded system projects using STM32 microcontrollers. This experience provided me with valuable insights into embedded software development, which is a cornerstone of defense technologies.

I also had the opportunity to participate in the International Astronautical Congress (IAC) program in Baku, Azerbaijan, through the opportunities provided by the T3 Foundation. This experience broadened my international perspective and allowed me to gain experience in space and defense technologies.

During my internship at the Technical Vocational High School, I was part of the Automation Software and Product Technology team. I worked with Siemens S71200 PLC and TiaPortal, as well as Delta on MPS systems at FESTO Didactic's AFB Training Factory, honing my skills in automation.

Currently, I am working independently on embedded software projects. I am involved in projects related to RTOS applications, and protocols such as UART and I2C. These projects have helped me understand the interaction between software and hardware, enabling me to manage complex systems effectively.

I am driven by a passion for innovation, staying up-to-date with emerging technologies, and collaborating to create impactful solutions in embedded systems.

EXPERIENCE

TeamLeader - Embedded System Software Developer

TAISAT Technology Team

August 2022 - October 2024, Vinsan Social Facilities

- Wrote sensor drivers using the C programming language.
- Developed Autonomous Satellite algorithms, Enabled manual tasks to be performed wirelessly on the Model Satellite.
- Wrote and implemented phased software testing processes.
- Adopted modular and clean code practices, Integrated documentation into my process.
- Participated in hardware repair and assembly tasks for the boards we developed.

Software Technician

Doping Hafiza Technology Company

September 2021 - October 2021, Istanbul

- Taking part in the implementation of software for projects such as the robot dog and samurai robot at Doping Hafiza's Technology Truck.
- I actively introduced the showcased projects to guests and inspired elementary and middle school students to dream big.

Technical Intern

Harmonik Automation Company

June 2019 - August 2019, Tekirdag

- Learning basic methods for part clamping and processing in CNC milling and turning machines.
- Gaining basic arc welding skills and the ability to weld parts onto the machine chassis.
- Working on the commissioning of machines and the construction of the control panel.

Technical Intern

Karman Automation Company

July 2018 - September 2018, Tekirdag

- Developed software to control four different traffic light systems simultaneously with PLC.
- Electrical panel manufacturing and mechanical assembly for an automatic resistance spot welding machine.
- Actively used SolidWorks and WPLSoft, TiaPortal programs.

PROJECTS

TURKSAT Model Satellite(2 Times)

TAISAT Model Satellite Team • www.linkedin.com/in/yunus-emre-kayra/details/projects/ • October 2023 - August 2024

- The competition requires the creation and operation of a model of a real satellite on the Earth's surface.

TeleRock

RotaCaelum Teknofest Team • www.linkedin.com/in/yunus-emre-kayra/details/projects/ • November 2023 - February 2024

- Flight Control Board for Model Satellites and Rocketry.

EDUCATION

Bachelor of Science in Mechatronic Engineering

University of Kocaeli • Kocaeli • 2026 • 2.57

CERTIFICATIONS

Teknofest Space and Aviation Initiative Achievement Certificate

Teknofest • 2024

• Successfully designing flight control boards for model rockets and satellites, and passing tests conducted by Roketsan.

Teknofest Model Satellite Achievement Certificate

TURKSAT • 2023

• Demonstrates the ability to design a model satellite in accordance with the requirements of Türksat.

COURSEWORK

Interplanetary Spacecraft and Satellite Engineering

Lluís Foreman - ValueKnow • 2023 • Astronautics, Spacecraft Systems

• Fundamentally, I gained knowledge about how vehicles used in the space environment are designed, the space environment itself, propulsion systems, communications and control, and power systems.

INVOLVEMENT

Board Member

University of Kocaeli • KOUTETA • September 2023 -October 2024

• I participated in school club organizations and led sponsorship activities.

SKILLS

- Bare-metal C/C++ programming and debugging.
- Basic level freeRTOS.
- Basic level Oscilloscope, Logic analyzer, SEGGER System View.
- Multimeter, Solder station.
- Wired and wireless hardware communication.
- Team player, Quick learner.