



Yiğit Aybey

MechatronicsEngineer|Hardware-Software Integration & IoT

✉ yigitaybeytr@gmail.com ☎ 05391096775 📍 Nicosia, Cyprus 🌐 <https://yigitaybey.com>

Profiles

🐙 GitHub

[yigitaybey](#)

🌐 LinkedIn

[yigitaybey](#)

Summary

Multidisciplinary Mechatronics Engineering student with hands-on expertise spanning embedded systems (ESP32, C++, FreeRTOS), game development (Unity, C#), and full-stack web platforms (HTML5, CSS3, JavaScript). Proven ability to take projects from concept through PCB design and firmware to deployed production — including a live culture-and-art web platform that secured corporate sponsorship, an autonomous IoT lighting system with custom power electronics, and a 3D roguelite mobile game built for an international hackathon. Seeking engineering and developer roles where hardware meets software to build products that ship.

Education

Cyprus International University

Bachelor of Science (B.Sc.)

Mechatronics Engineering

Nicosia, Cyprus • Sep 2023 – Present

Coursework: Circuit Theory, Electronics, Embedded Systems, Signals & Systems, Linear Control Systems (PID), Robotics & Kinematics, Digital Circuit Design, Thermodynamics, Engineering Mechanics (Statics & Dynamics), Strength of Materials, Calculus I-II, Linear Algebra, Differential Equations.

Anadolu University

Bachelor of Science (B.Sc.)

Management Information Systems

Eskişehir, Türkiye (Distance Learning) • 2025 – Present

Coursework: Information Systems, Software Architecture, Project Management, IT Infrastructure, Business Technology Strategy.

Experience

ELT Overseas Education (ELT Yurtdışı Eğitim)

Nicosia, Cyprus

Cyprus Operations Manager & Education Consultant

Mar 2024 – Jun 2026

Managed end-to-end operational coordination for the Cyprus region, overseeing student admissions, institutional partnerships, and cross-border communication with international education providers.

Developed and executed region-specific digital marketing strategies across corporate social media channels, increasing local brand visibility and student engagement.

Delivered personalized education consultancy and career planning services, guiding prospective students through application and enrollment pipelines.

Overseas Education Operations Intern (İzmir, Türkiye)

Jul 2025 – Aug 2025

Managed international email correspondence with foreign educational institutions, facilitating timely communication and document exchange across time zones.

Compiled, organized, and digitally archived 100+ student application files, ensuring data accuracy within the internal CRM database.

Created detailed Excel reports tracking student payment statuses, school enrollment processes, and partner institution promotions.

Freelance / Project-Based

İzmir, Türkiye

Field & Hardware Technician

Jun 2024 – Aug 2024

Installed, configured, and commissioned IP and analog security camera systems for industrial facilities, including kilometers of low-current, network, and power cabling infrastructure.

Performed hardware diagnostics, component upgrades (RAM, keyboards, storage), and OS installations for laptop and desktop systems across multiple client sites.

Conducted fault detection, basic repair, and preventive maintenance on Uninterruptible Power Supply (UPS) units, minimizing downtime for critical infrastructure.

Projects

Personal Engineering Portfolio

2026 – Present

Built a dark-themed personal portfolio website from scratch (HTML5, CSS3, vanilla JS) showcasing mechatronics, embedded systems, and game development projects, achieving a perfect 100/100 Google PageSpeed desktop score.

Implemented SEO-optimized Schema.org JSON-LD structured data, OpenGraph metadata, custom keyboard-accessible lightbox gallery, IntersectionObserver scrollspy navigation, and an AI-crawler-optimized llms.txt descriptor file.

<https://yigitaybey.com>

Bu Da Bi Art – Culture & Art Web Platform

2024 – Present

Designed and built a multi-page culture and art platform from scratch using semantic HTML5, CSS3, and vanilla JavaScript – zero frameworks, zero templates – achieving Google PageSpeed scores of 99/100 (desktop) and optimized local media delivery.

Implemented a 3-layer anti-bot contact form (base64 key injection, honeypot fields, custom math CAPTCHA), integrated social media streams (TikTok, YouTube, Instagram), and secured a ₺15,000 corporate sponsorship for the platform.

Smart Ambient Lighting – Autonomous IoT System

2026 – Present

Engineered an autonomous IoT adaptive lighting system using ESP32-S3, C++, and FreeRTOS dual-core architecture: Core 0 handles Wi-Fi/MQTT polling with AP fallback; Core 1 executes hardware PWM fading via a custom-derived linear control equation and PID loop with moving-average filtering to eliminate shadow hysteresis.

Designed the complete power stage using IRLZ44N logic-level MOSFETs for 24V/5A LED load switching, BH1750 I2C lux sensing, LM2596 DC-DC regulation, and followed a strict Virtual-to-Physical pipeline: Wokwi simulation → breadboard smoke test → KiCad custom PCB → Fusion 360 3D-printed enclosure.

Flora – 3D Roguelite Survival Mobile Game

2026 – Present

Developing a dystopian 3D low-poly mobile roguelite in Unity (C#) combining Bullet Haven wave combat with strategic base-building mechanics, targeting an international hackathon submission with a 3-person team (Triple-Y Game Studio).

Engineered high-performance mob swarm systems using object pooling and optimized A* pathfinding, integrated Animator Controllers for character state machines, and designed a charity-linked in-app purchase system that funds real-world tree planting via Trees for the Future API.

Skills

</>Programming Languages

c++, HTML5, CSS3 JavaScript, C#

🔧Hardware, IoT & CAD

ESP32 / ESP32-S3, Arduino, KiCad (Schematic & PCB Design), Autodesk Fusion 360, LTspice, I2C / SPI / UART, PWM, MQTT, BLE, MOSFET Power Electronics, Sensor Integration, 3D Printing (FDM), SMD/THT Soldering

🛠️Tools, Engines & Platforms

Unity, GitHub, VS Code, Visual Studio, Adobe Photoshop, OBS Studio, Google Analytics (GA4), Microsoft Clarity, Wokwi Simulator, Math Lab, AutoCad

Languages

Turkish

Native

■■■■■

English

Professional Working Proficiency (B2)



Spanish

Elementary (A1-A2)



Interests

🏠 Personal Interests

MakerCulture,PhysicalComputing, Systems Thinking, Open-Source, Technical Blogging, Indie Game Design, Digital Music Production, Electric Guitar