Serdar ALTINKAYA| CV

SUMMARY

After completing my B.Sc. in 2019, I fulfilled my military service. I received my M.Sc. in Engineering from Abant Izzet Baysal University in 2022, where I worked on an industrial R&D project with a major home appliances manufacturer, focusing on temperature control systems. My thesis led to the development of a stable measurement system for platinum resistance temperature sensors, which was published in *Laboratory Technology* (Vol. 66, 2023).

Currently, I work as a Flutter Developer at Smart Maple, where I have developed and published multiple cross-platform mobile applications. I am also involved in mobile game development using Unity.

I aim to deepen my technical skills and contribute to R&D-driven, innovative environments, especially within EU-funded projects.

PERSONAL INFORMATION

Personal Qualities	Detail-oriented and ambitious professional with strong communication skills. Adaptable and responsible team player, committed to delivering results and driving continuous improvement.
Interests and hobbies	Applied research, mobile technologies, embedded systems, and following advancements in engineering and innovation.
Driver's license	B
Nationality	Turkish
Language	Turkish (Native), English (Speaking and writing)
Marital status	Single
Year of Birth	1996
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My Personal Web Addresses	https://github.com/serdar483 (Professional work mostly under private repositories; samples available upon request.) https://www.linkedin.com/in/serdar-altınkaya-45018610b/

ABILITIES

Area of Expertise	Actively working with Flutter for mobile app development, alongside PCB design and 3D printing. I also have experience in Unity-based game development and a prior background in embedded systems programming.
Programming Languages and Computer Skills	Proficient in Flutter (Dart), C#, Java/Kotlin, and embedded programming tools including STM32CubeMX and Keil uVision.
Courses	Flutter & Android App Development (Udemy), PCB Design (Altium), C# & PLC Programming (Elginkan Foundation), English Language (B1–B2)

PROFESSIONAL EXPERIENCE

2022 – Present — **Flutter Developer**
Smart Maple

- **Developing cross-platform mobile applications using Flutter (Dart), RESTful APIs, and Firebase.**
- **Contributed to several published apps on Google Play Store and Apple App Store.**
- **Involved in UI/UX design and the full development lifecycle of various applications, from prototyping to release.**

2021 – 2022 — **Scholarship Researcher – TÜBİTAK-TEYDEB Project**
Abant Izzet Baysal University

- **Collaborated on an industry–university R&D project with a leading home appliance manufacturer (Arçelik).**
- **Focused on temperature measurement and control systems for oven technologies.**
- **Responsible for data acquisition, system control, and research-related documentation.**

2020 – 2021 — **Engineering & Security Officer (Military Service)**
Turkish Armed Forces, General Staff

- **Served in a specialized engineering unit for approximately 10 months.**
- **Recognized with a plaque of appreciation for outstanding performance.**
- **Further details are confidential due to the nature of the assignment.**

Summer 2018–2019 — **Project Planning Intern**
EAE Group (EAE Electric & EAE Lighting)

- **Gained hands-on experience with electrical busbar systems and architectural lighting technologies.**
- **Learned project planning processes and technical documentation in power distribution and lighting design.**
- **Used AutoCAD for 3D technical drawings and Dialux for lighting analysis and room-based planning.**

EDUCATION AND QUALIFICATIONS

2014 — **Abant İzzet Baysal University — Bachelor's Degree in Electrical and Electronics Engineering**
2016 — **Atatürk University — Associate Degree in Occupational Health and Safety**
2020 — **Abant İzzet Baysal University — Master's Degree in Electrical and Electronics Engineering**

PROJECTS

2017 — **Bluetooth-Controlled Car Project**

- Designed and implemented a Bluetooth-controlled vehicle using the PIC16F877A microcontroller.
- Integrated a Bluetooth communication module for wireless command transmission.
- Developed a custom mobile interface to control vehicle movement in real time.

2018 — **Fire Alarm System (Undergraduate Project)**

- Designed a multi-parameter fire detection system using PIC16F877A.
- Monitored temperature, humidity, smoke density, and carbon monoxide (CO) levels.
- Transmitted sensor data to a PC for processing via a custom C# desktop interface.

- Developed a web-based monitoring platform and integrated ESP8266 Wi-Fi module for wireless data communication.

2021 **Temperature Measurement and Central Temperature Estimation in Household Electric Ovens**

- Developed a high-accuracy temperature measurement system using a PT1000 sensor and STM32F407VG microcontroller.
- Improved ADC measurement accuracy through both hardware-based filtering circuitry and software filtering algorithms.
- Collected reference temperature data using Keysight data acquisition systems.
- Applied Artificial Neural Networks (ANN) and polynomial regression methods to estimate central oven temperature from corner measurements.
- Evaluated and compared three different control strategies, selecting the most efficient method for system optimization.

2022 **Iron Man Helmet Project**

- Designed and manufactured a life-size Iron Man helmet replica using 3D printing technology.
- Developed a servo motor mechanism to enable remote-controlled faceplate movement.
- Designed electronic control circuits and programmed the microcontroller for motion control.
- Modeled mechanical components precisely prior to additive manufacturing.

2022 **Movie Recommendation App**

- Developed a cross-platform mobile application using Flutter (Dart).
- Integrated IMDB API for dynamic movie data retrieval.
- Implemented personalized recommendation logic based on user preferences.
- Designed a modern and responsive user interface with real-time API integration.

2024 **Arc Reactor Desk Clock**

- **Designed a** Wi-Fi enabled desk clock using NodeMCU V3 (ESP8266).
- Retrieved accurate time data via NTP (Network Time Protocol).
- Integrated programmable LED lighting system for aesthetic enhancement.
- Combined embedded systems development with 3D printed mechanical design.

2025 **Drone Controller**

- Designed and implemented a 4-motor control system using STM32F103 and dual DRV8833 motor drivers with PWM-based speed control.
- Integrated MPU9250 IMU sensor for acceleration and orientation data acquisition.
- Developed a C# desktop application for real-time sensor data visualization with live graph plotting.
- Implemented digital filtering algorithms to reduce sensor noise and improve measurement stability.
- Designed portable power architecture including Li-Po battery management and boost converter circuitry.

REFERENCES

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