

Achim Andrei-Cosmin

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WORK EXPERIENCE

Siemens SRL - Internship

Feb 2023 – Oct 2024

Embedded Software Developer

Brasov, RO

- Developed and implemented an IoT system using an ESP32 and sensors to collect data, which was sent via MQTT to a mobile app I built with Flutter. This allowed real-time monitoring through an easy-to-use interface, giving me hands-on experience with embedded systems, MQTT, and mobile app development.
- Built a monitoring system with an STM32 microcontroller that collected sensor data and transmitted it using the Modbus protocol to an interface I designed in C# with WPF. This project deepened my experience with embedded communication (USART, I2C, SPI), real-time data handling, and desktop application development.
- Learned the basics of embedded systems using the ATmega328P microcontroller, focusing on core concepts like interrupts, timers, ADC and USART communication.

EDUCATION

Transilvania University of Brasov

2021 - 2025

Faculty of Electrical Engineering and Computer Science

Brasov, Romania

Bachelor's degree in Automation and Applied Informatics

- Relevant courses: C/C++, Embedded Programming, Java, C#, SQL, HTML/CSS, Data Structures and Algorithms, Digital Circuits, Computers Architecture, Programmable Logic Controllers, Robotics.

PROJECTS

WiFi-Controlled RGB Light Using ESP32 and Mobile App

[GITHUB REPOSITORY](#)

Created a mobile app to control an RGB light via an ESP32, which created a soft access point network for connection. The app communicated over WiFi to adjust color and brightness using PWM.

Kotlin Mobile App

[GITHUB REPOSITORY](#)

Built a mobile app to calculate the production costs of windows, improving efficiency in estimating materials and pricing.

TV Shows Tracker with CRUD Functionality

[GITHUB REPOSITORY](#)

Created a CRUD application using Node.js, Express.js, and MongoDB to manage a list of TV shows. The app allows users to add, view, update, and delete their favorite shows.

C++ SFML Game Functionality

[GITHUB REPOSITORY](#)

The project involves player movement, collision detection, and shooting mechanics, providing hands-on experience with real-time graphics programming and improving my skills in C++ and SFML for game development.

Mergesort Visualization Tool in Java

[GITHUB REPOSITORY](#)

Built a Java application to visualize the Mergesort algorithm, focusing on GUI development using Java Swing to illustrate sorting steps.

SKILLS & INTERESTS

- **Technical Skills:** C/C++, Embedded Programming, Kotlin, Flutter, C# WPF, Python, Java, Javascript, SQL, HTML/CSS.
- **Non-technical Skills:** Fast learner, Team oriented, Problem Solver, Creative.
- **Interests:** Embedded Development, App Development, Game Development.