Mihail Chindris

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Summary

I am an engineer with expertise in IoT, embedded systems, and software development.
With a background in industrial engineering, my evolving skill set spans a variety of technologies from electrical knowledge and hardware programing to the development of the final monitor and control applications.
Proficient in C/C++, Python, and displaying a keen interest in Rust, I bring a versatile and dynamic approach to problem-solving and project development.

Experience

Embedded Software Developer

NXP Semiconductors

Apr 2023 - Present

Drove C-based AUTOSAR-compliant software development with a focus on SPI driver implementation, maintenance and requirements analysis.
Actively contributed to improvement ideas for enhancing the efficiency and effectiveness of tools used across the team, showcasing a commitment to continuous optimization and innovation.

Laboratory Teaching Assistant

Technical University of Cluj-Napoca

Oct 2023 - Present

Teaching Computer Programing laboratory at Bachelor's level to 1st and 2nd year students.

Software Development Engineer

Amazon Web Services (AWS)

Feb 2022 - Mar 2023 (1 year 2 months)

Contributed to the development of AWS EC2 features for the confidential computing team, taking ownership from conceptualization to deployment.
Demonstrated proficiency in low-level programming languages, including C/C++ and Rust, during code writing, while ensuring the reliability and robustness of features through comprehensive testing in Python and Golang.

System Software Engineer

Analog Devices

Oct 2019 - Jan 2022 (2 years 4 months)

Made substantial contributions to the role by developing component drivers for both bare metal and the Linux kernel (upstreamed work). These drivers encompassed various protocols, including SPI, I2C, UART, and others.

Played a pivotal role in a Geiger Counter project, where I implemented MQTT communication over WiFi using the ESP8266, enhancing data exchange and connectivity. Added web application for data display.

Showcased effective project management capabilities by initiating a comprehensive continuous integration (CI) system from the ground up. Leveraged Azure Pipelines and integrated Makefiles to enhance and streamline development workflows.

This showcased a holistic skill set in hardware interfacing, communication protocols, and embedded systems development.

Java Software Developer - Intern

Montran

Jul 2018 - Aug 2018 (2 months)

Engaged in a banking application project utilizing Java and Spring Boot.
Successfully integrated Ethereum cryptocurrency payments into the system.

Internship Trainee

Bitdefender

Jul 2017 - Sep 2017 (3 months)

Acquired expertise in assembly language, reverse engineering, and malware analysis.
Investigated exploit mechanisms, and contributed to robust mitigation strategies

Education

Technical University of Cluj Napoca

Master's degree, Information and Computing System Security

2019 - 2021

Developed skills in reverse engineering to analyze and identify potential security risks.
Conducted in-depth malware analysis, dissecting malicious code to identify patterns and vulnerabilities.
Specialized knowledge in securing cloud environments, including identity and access management, encryption, and secure cloud architecture
Implementing secure coding practices to proactively prevent vulnerabilities in software development.
Acquired expertise in cryptographic techniques and protocols, including encryption methods and PKI.
I gained expertise in security at the hypervisor level, focusing on ensuring the integrity and confidentiality of virtualized systems.

Technical University of Cluj Napoca

Bachelor's degree, Automation and Applied Informatics

2015 - 2019

Control systems design, emphasizing closed-loop mechanisms and optimization techniques.
In-depth study of electrical, electronics, and mechanical systems.
Applied knowledge of robotics, sensors, and actuators for effective automation solutions.
Utilized MATLAB and Simulink for simulation, particularly focusing on optimization in control systems.
Proficient in microcontroller programming, especially in C.
Actively participated in various extracurricular activities, enhancing skills beyond the academic curriculum: Coding Competitions, Hackathons

Academy+Plus

Certificate of programmer, Computer Science

2015 - 2016
Intensive, project-based coding program honing skills in various programming languages, algorithms, and software development.
Thrived in a collaborative, peer-to-peer learning environment.

Skills

C (Programming Language) • Microcontrollers • Python (Programming Language) • Cybersecurity • Linux Kernel • Git • Embedded C • Raspberry Pi • Electronics • Internet of Things (IoT)

Projects

IoT GPS Tracking System

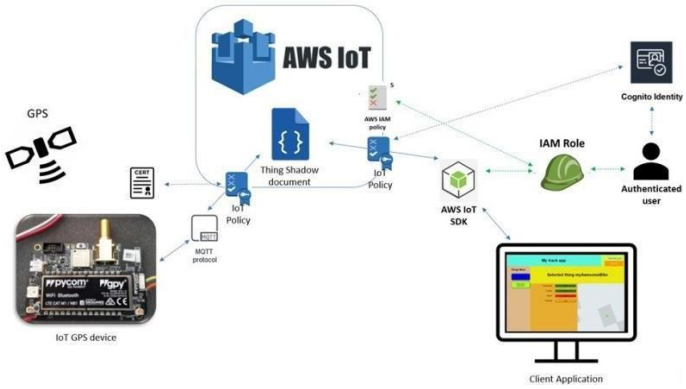
Built an IoT GPS tracking system, spanning from the hardware level through the cloud and reaching a web interface.

As hardware, use Pycom board to collect accelerometer and GPS data and send it over NB IoT

Implemented secure communication to AWS IoT Core, employing robust policies and access management.

Developed a dynamic web application using **React** and AWS Amplify including user authentication, to render real-time GPS tracking data on map.

This comprehensive project showcased expertise in both IoT hardware integration and cloud-based web application development.



Degree project - Pace Car

Engineered a toy car project to autonomously navigate the lanes of an athletics track keeping a constant speed.

Developed the control system using C++ on an STM32 board to ensure consistent and reliable speed control for the car, demonstrating proficiency in control engineering.

Implemented the lane detection using Python on a Raspberry Pi, leveraging the onboard camera, showcasing expertise in computer vision.

Designed an Android app in to provide a user-friendly interface for adjusting the car's speed.

