M. Erdem Tusun

Electrical and Electronics Engineering
Undergradute (4th Year)
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in mustafa-erdem-tusun

EXPERIENCE

ANALOG DEVICES

Embedded Systems Intern |July-August 2022 | Istanbul,Turkey

- Worked with Digital Healthcare Team that is working on a Smart Watch project.
- Examined the embedded software of the smart watch and learned how the algorithms were implemented in the watch, the importance of RTOS for the watch, and how the sensors worked.
- By examining the algorithm team, examined the algorithms in which measurement data are processed and learned the algorithm development and testing stages
- Experimented by writing his own codes with the MAX32666 card produced by Analog Devices, which uses an ARM MCU similar to the microcontroller used in a smart watch, and developed simple projects with simultaneous tasks using freeRTOS.
- Helped with the tests and developed a Python parser application that took the binary data produced by the smart watch in the tests and converted them into a readable csv file.

TUBITAK , ESIT Electronics

Smart Earthquake Vibration Sensor Project | March 2023 - Present | Istanbul, Turkey

- Working on a TÜBİTAK research project for detecting damaged buildings with only with their vibrations fourier transform calculating on low power MCU.
- Using ADXL355 accelerometer and STM32 B-L072Z-LoraWAN board for measuring and built a LoRa SX1276 network and developed most of embedded software and its hardware. Working on a LoRa RF Module PCB Design and testing now.
- Working to implement Deep Learning to detect damaged buildings with MEMS data. Using TensorFlow Lite and Stm32CubeAi for doing the machine learning in Microcontroller. Also aiming to do predictive maintenance with these.

MARCO

Team Member , Embedded Systems Programmer | January-June 2023 | Istanbul, Turkey

- **Winner** of TEKNOFEST ISTANBUL 2023 "Digital technologies in Industry" Competition.
- Worked with the Team on an vehicle that is designed for carrying cargo in warehouse fully autonomous.
- Developed Embedded Software on STM32 F407 microcontroller to make vehicle autonomous.

REFERENCES

- Prof. Dr Cem Unsalan - unsalan@gmail.com - Embedded Systems Professor and Department Head at Yeditepe University

EDUCATION

MARMARA UNIVERSITY

Electrical-Electronics Engineering(English) | Undergraduate 4th year(2020-2024) | Istanbul, Turkey

- Organization Team Member in IEEE Marmara Student Branch, Robotics and Automation Society.
- Working to organizing educations about automation, robotics and Summits with companies and skilled engineers. He took part in the organization of the Defense Industry Summit, Artificial Intelligence Summit and etc

SKILLS AND PROFICIENCIES

- **Embedded Software:** ARM , STM32, ESP32 , Keil uVision , Eclipse IDE , HAL , RTOS , FPGA , Verilog , SystemVerilog , Machine Learning , TinyML
- **Embedded Hardware:** PCB Design , Altium , KiCAD , Semiconductors , Integrated Circuits , RF Module Design
- **Programming:** C , C++ , Java , Python , C# Web and App development, MATLAB
- **Soft skills:** Dexterity , Teamwork , Fast Learner
- **Languages:** English | B2-C1 , German | A2 , Turkish | Native

RELATED COURSEWORK

- Microprocessor Systems
- Digital Design
- Object-Oriented Programming
- Digital Communications
- Artificial Intelligence in Health Sciences

IMPORTANT NOTE: I HAVE WORK PERMIT IN EUROPE THROUGH ERASMUS+ PROGRAMME, I DO NOT NEED SPONSORSHIP FOR VISA OR PERMIT.