



Matko Zrnić

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Gender: Male **Date of birth**: 25/06/1996 **Nationality**: Croatian

WORK EXPERIENCE

Faculty of Electrical Engineering, Computing and Information Technology

City: Osijek | **Country**: Croatia

[21/10/2020 – 13/11/2023]

Embedded systems software developer

- Software development for custom made devices used in real time agricultural data monitoring (C language, USB, SPI, I2C and UART protocols)
 - Three different versions of custom made devices using STM32 microprocessor
 - LoRa communication (mostly RFM95 module)
 - Variety of sensors (temperature, humidity, pressure, ambient light, VOC gas and spectral sensor)
 - Minimization of power consumption
 - Code efficiency
 - Utilization of different sleep modes
 - Custom algorithm for minimizing transmission data size
 - High communication range utilizing
 - Maximizing device reliability and working efficiency
- Giving lectures in objective oriented programming at the faculty (C++ language)
- Publishing articles based on testing and comparison of multiple components and devices

Orqa

City: Osijek | **Country**: Croatia

[14/07/2019 – 19/11/2019]

Embedded systems software developer

- Microcontroller software development (C language, Wi-Fi communication, USB, SPI and I2C protocols)
 - STM32 software used for flashing software on VR headsets
 - ESP32 software used in remote gate control access via NFC and user authentication
- QT application development (C++ language)
 - Windows application used for control and feedback from custom made device used for flashing software
- Designing 3D housing for multiple devices
- Soldering of device components
- Assembly of electrical devices
- Testing electrical devices

EDUCATION AND TRAINING

[2017 – 2020]

Master's Degree in Computer Science

Faculty of Electrical Engineering, Computing and Information Technology

City: Osijek | **Country**: Croatia

[2014 – 2017]

Bachelor's Degree in Computer Science

LANGUAGE SKILLS

Mother tongue(s): Croatian

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DRIVING LICENCE

Cars: B

CONFERENCES AND SEMINARS

- [30/06/2021 – 02/07/2021] **ConTEL 2021 - 16th International Conference on Telecommunications.** Zagreb, Croatia
Presenting a paper: Low-Cost Wireless Sensor Node for Smart Agriculture Applications
Link: <https://ieeexplore.ieee.org/abstract/document/9495976>
- [19/10/2022 – 21/10/2022] **2022 International Conference on Smart Systems and Technologies (SST)** Osijek, Croatia
Presenting a paper: LoRaWAN Parameters Optimization For Efficient Communication.
Link: <https://ieeexplore.ieee.org/abstract/document/9954704>
- [19/05/2023 – 19/05/2023] **Eleventh International Scientific Meeting** Brčko, Bosnia and Herzegovina
Presenting a paper: Requirements and Possibilities of Agricultural Data Processing.

VOLUNTEERING

- [13/08/2010 – 16/08/2020] **Computer hardware repair technician - Pannonian challenge** Osijek
- Computer equipment setup
 - Computer equipment maintenance
 - Technical support
- [04/06/2019 – 09/06/2019] **Computer hardware repair technician - Pannonian challenge** Osijek
- Computer equipment setup
 - Computer equipment maintenance
 - Technical support

OTHER EDUCATION

- [15/02/2021 – 27/02/2021] **Winter School course Internet Of Things**
- IoT system for patient monitoring using smart wristband