MARTIN **TIMKO**

Žilina / Košice (Slovakia) · 25 years
martin.timko195@gmail.com · **+421 949 236 864** · **in/@mtimko95**

Graduate of information technologies with a focus on multimedia, interested in IoT and Smart Home, electronics, and opportunities of modern technologies.

EDUCATION

2015 – 2021
UNIVERSITY OF ŽILINA | FACULTY OF ELEC. ENGINEERING AND INF. TECHNOLOGY
MULTIMEDIA ENGINEERING

- Bachelor thesis: **Controlling of stage lighting equipment**
- Diploma thesis: **Design of IoT communication system between eCar, cloud and end-user**

2020
KAUNAS UNIVERSITY OF TECHNOLOGY | LITHUANIA
INFORMATICS

- Erasmus+ mobility

2011 – 2015
SECONDARY SCHOOL OF ELECTRICAL ENGINEERING | PREŠOV
INFORMATION AND NETWORKING TECHNOLOGIES

- Final thesis: **File encryption software based on own algorithm**

EXPERIENCES

2016 – 2020
HEAD OF ORGANIZATION, Í-TÉČKO - STUDENT TELEVISION

- Team management, responsibility for the operability of the equipment, financial budget and modernization process
- Working with cameras, postproduction, live broadcasting control
- Cooperation in the production of aftermovies, student films, reportages, etc.

2015 – 2020
SOUND AND LIGHT ENGINEER, WM AUDIO S.R.O.

- Sound mixing, lighting control and technical support at concerts or other social events
- Responsibility for stage building and tech preparation, operational troubleshooting during the event and transportation of the equipment
- Installation of multimedia, IT and network equipment into the clubs and venues, the maintenance and servicing of them

05/2013 – 08/2013
COMPUTER TECHNICIAN, ITCITY S.R.O.

- Repairing, maintenance and installation of computers/laptops HW and SW

SKILLS

Programming:
- C, C++, Qt – intermediate
- Java, Android – intermediate
- JavaScript, Node-RED
- SQL, NoSQL
- HTML, CSS, Bootstrap, Jekyll

- AWS: Lambda, DynamoDB, API Gateway, SNS
- Experiences with IBM Cloud, Azure, Firebase
- Amazon Alexa Skills creation Kit

Network and communication technologies:
- Cisco CCNA 1-4
- IP stack, switching and routing principles
- signal processing, modulations, multiplexing

- IoT technologies – Sigfox

Hardware and electronics:
- Computer HW architecture
- Atmel AVR, Arduino, Raspberry Pi, ESP8266

- Electronic components
- Fundamentals of electronic circuits

Entertainment and multimedia:
- Sound engineering – artists performances, small concerts, analog and digital sound mixing boards
- Sound signal principles – modulation, codecs, file formats
- Lighting control – conception of stage lighting devices, Nicolaudie Sunlite, Avolites Titan
- Control protocols – MIDI, DMX512, Art-Net
- Video – broadcasting chain, video editing, postprocessing, digital transmission and streaming protocols
- Video processing – characteristics, compression, codecs, container formats, basics of image recognition

PROJECTS

CONNECTIVITY SYSTEM FOR ELECTRIC VEHICLES

A practical part of my diploma thesis, a cloud-based communication platform between an electric vehicle and its owner. Vehicle Simulator built with Raspberry Pi and custom simulation software written in C++. Connectivity to cloud via Sigfox and WLAN. Backend hosted in AWS, using FaaS as a JavaScript runtime, storing of data in a NoSQL database. An android app written in Java, backed by Firebase, communicating through REST API and push-messaging.
See m4rtin195.github.io/EV-IoT-Kit.

SLEEP QUALITY ASSISTANT

Smart device for monitoring bedroom conditions, user sleeping habits, scoring it, and offering recommendations, with integration with Philips Hue and Amazon Alexa. Developed for ON Semiconductor's IoT Design Challenge 2019, it won 1st place.
Server-side programmed in JavaScript, running on Node-RED, on an own Synology server.
Firmware of the device written in C++.

DMX512 HW SIGNAL MERGER

A practical part of my bachelor thesis, a device based on AVR microcontrollers, which joins two DMX512 signal streams together. The project also included the design of an electronic circuit and the creation of a PCB. Programmed in low-level C.

ENCRYPTION SOFTWARE

Hobby project, later used as a final thesis at high school. While typing anywhere, press ctrl+a,c,v, and it's de/crypted. Written in C++ and Qt, using its own symmetric encryption algorithm.

ABOUT ME

I am a person who loves technologies of all kinds. Since childhood I have always been where the computers were, but later I found my interest in the work around the events and stages, and digital technologies used in this brand. During my university studies, I was targeting both of these directions, which was made possible by the field of study that combined them. In addition, I learned new things about telecommunications, and found, how to utilize my knowledge from all these areas. I've decided that the path I want to take, is about IoT, and solutions for smart cities and households.

In my free time I like to go hiking, climbing, or river rafting with my friends, am testing some gadgets, or working on some own project. I love working on things that can be useful or be an experience not only for me, but also for other people.

OTHER

- **English language** - level B2
- **Driving license**: category B – since 2014, 50 000km
- Experiences with people management

- Competence in electrical technology - Article 21 (SK)
- ECDL, Microsoft MTA - cat. Windows Operating System
- Fibaro Home Automation System Installer certificate