Curriculum vitae

PERSONAL INFORMATION

Anel Husaković

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Gender M | Date of birth 17 Septembar 1988

WORK EXPERIENCE

March 2022 - present

CEO/Software developer

"Eacon d.o.o"
Lukovo polje 69, 72000 Zenica (Bosnia & Herzegovina)

- open source software developer (main field databases)
- custom software integration
- web applications

January 2018 - March 2022

CEO/Software developer

"Eacon"
Bilimišće 69, 72000 Zenica (Bosnia & Herzegovina)

- open source software developer (main field databases)

November 2016 - present

Teaching professor

High school "Tehnička škola Zenica"
Bilimišće 69, 72000 Zenica (Bosnia & Herzegovina)

September 2015 - present

Senior teaching assistant

University of Zenica "Mechanical Faculty of Zenica"
Fakultetska 1, 72000 Zenica (Bosnia & Herzegovina)

November 2015 – October 2016

R&D electronic and automation engineer

Liva Energy d.o.o.
Igmanska bb, 71320 Vogošća (Bosnia & Herzegovina)

- Design and development of LED fixture with focus on electronic as well as thermal characteristics of the product.
- Development of electronic design and embedded programming of control systems for LED lighting.
- PCB design and arrangment of files necessary for SMD and THT manufacturing process.

February 2015 – November 2015

Electrical engineer

ArcelorMittal
Bulevar Kralja Tvrtka I, br.17, Zenica, 72000 (Bosnia & Herzegovina)

- System automatization.
- Maintenance of the systems.
- Extending the functionality of the systems.

November 2013 – November 2014

Head of the department for operational planning of electricity

Euro-power d.o.o.
Krndija bb, 74260 Tešanj (Bosnia & Herzegovina)

- Operational planning of electricity consumption.
- Load forecasting.
- Electricity trading software development for the suppliers of the second order.
- Active participation in creating the sublegal acts for the liberalization of the electricity market in Bosnia & Herzegovina.

January 2013 – September 2013

Software developer

Vendostar d.o.o.
Nusreta Šišića Dede 17, 71000 Sarajevo(Bosnia & Herzegovina)

Modeling the functionality of the hybrid cars battery in the software framework Dymola/Modelica, as a part of the German company (Modelon) project.

EDUCATION AND TRAINING

2017- present

PhD student

Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

2010–2012

Master of Electrical Engineering – department of automatic control and electronics

Faculty of Electrical Engineering,University in Sarajevo, Sarajevo Bosnia & Herzegovina

Averaged score: 9.26

2007–2010

Bachelor of Electrical Engineering – department of automatic control and electronics

Faculty of Electrical Engineering,University in Sarajevo, Sarajevo Bosnia & Herzegovina

Averaged score: 8.35

PERSONAL SKILLS

Mother tongue: Bosnian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
	Agencija za strane jezike L.M.A Language Masters Agency Zenica, drugi stepen (B2)				
German	B1	B1	A2	A2	B1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Independent user	Proficient user	Independent user	Proficient user

Digital competences - Self-assessment grid

Communication skills

- *Team work:* I have worked in a various types of teams during education as well as in professional career with teams in project development (software and industry).
- *Adaptability:* Whilst working on different projects, I had a chance to work with people different cultures and professional branches.

Organisational / managerial skills

- I have worked as a system engineer and I had a chance to lead a team.
- As a teacher I have organized visits for students to a thermal power plant *"Termoelektrana Kakanj"* in order to concretize the learned knowledge.

Computer skills

- **OS:** Linux, Windows (rarely)
- **Programming languages:** C, C++, bash, C#, Python, VB, Java (essential), Assembler, Modelica, Verilog.
- **Web developing:**
  - *front-end (not a fan):* html/css, javascript/jquery, bootstrap,
  - *back-end:* php/laravel, nodejs, Django, Nginx (essential)
  - *databases:* MSSQL, MySQL/MariaDB, Mongo.
- **Development platforms:** .Net, Eclipse, Altium, Matlab/Simulink, Dymola, Eplan, Multisim, CoIDE, Keil, CoCox, MPLAB.
- **Embedded programming:** PIC, TI, STM32, ATMEGA, RaspberryPi.
- **Communication protocols:** RS232/485, bluetooth, SPI, wi-fi, UART, I2C, GSM, Modbus, Profibus.
- **Version Control Systems:** git.
- **PLCs (essential all):** Siemens (Step7/WinCC, TIA), Schneider (SoMachine), ABB (Controlbuilder, 800xA, CompactHMI), EasySoft, Wago (CodeSys).
- **Variable frequency drives (essential all):** Danfos (MCT10), Sinamics/Micromaster (Starter), Altivar71, Ami-Ge.
- **Statistics and Machine learning:** SPSS, R.
- **Mechanical design:** SolidWorks (essential).
- **DevOps:** Docker.
- **Robotics (essential):** ROS (Robot Operating System)
- **Editors:** Visual Studio Code, vim, Latex
- **Electrical installation/schemas:** QElectroTech

Other skills I love to travel and to meet new people. Enjoy all sports particulary football and athletic.

Driving licence B

ADDITIONAL INFORMATION

Teaching fellow During the faculty from September 2009 till February 2010 at Faculty of Electrical Engineering in Sarajevo I was a teaching fellow.

Certificates **UT.6.03x: Embedded Systems - Shape the World**
University of Texas System
https://courses.edx.org/certificates/d4dae7704f534cc3a7a186079b424cd7

Development projects

- **Energy monitoring application:** (Work in progress) *2021* Django web application for daily monitoring of energy consumption for the devices based on Modbus data (TCP/RTU), generating custom alarms and notifications based on the power (or custom variable) demands and custom reports.
- **Industrial automatization:** In *2021* automatization of water cycle for autoclave machine used in a process of glass manufacturing was done.**client:** *Kristal d.o.o Vitez*. For the same company was done installation of energy meters as the first step in the energy monitoring.
- **Student enrollment** In *2020* protoype of the application used for students enrollment in secondary school is created done in Django. The example is tscze web application (but you need login or I've intentionally shutdown the service , sorry). The reason is to help teachers to register students and that students have transparent and the real-time results.
- **Mojezagadjenje:** (Work in progress) Web application (2018, 2021): mojezagadenje with the code residing on GitHub. The application is used to collect pollution data. The poluttion data is currently only visible on FHMZ BiH where data is changed each hour and is visible only in the real time. *The database for storing pollution data doesn't exist in Bosnia and Herzegovina*. This application is collecting data from 2018 and is used as the training model for the new open-source software developers.
- **Project Internet of Thing (IoT):** In *2017* the portable device used for the *Time and Date evidence* with *RFID* cards (IoT) was developed (**client:** *Pharmaceutical Chamber of Federation of Bosnia and Herzegovina*). The device has 7" display and RFID card reader attached. Software (GUI) running on device is done in *Python/tkinter* and it has a local database (*MySql*) for storing a local information about user's time evidence as well as CRUD users. Also web app is done in *Laravel* for storing all data from the local database on the server.
- **Web pages/applications:**
  - *South East European Pharmaceutical Association* http://sepassociation.org/
  - *Pharmaceutical Chamber of Federation of Bosnia and Herzegovina* http://www.farmaceutskakomora.ba/
  - Pharmacy *VIOLA-pharm* http://www.viola-pharm.com/
- **Project Electronic solutions for controlling the LED lighting using $DALI$ protocol with GSM and/or HMI moduls:** In this project (*2016*), I have created electronic design for controling the LED street light according to specific DALI protocol which is used as a standard in controling the LED engines. Also I have done a firmware (in C) for this purposes. Future work can be to create a web platform for such a project *(Liva Energy)*.
- **Raspberry Pi implementation of *DALI* protocol for lighting control:** In this project (*2016*) the firmware was created (*made in C and Python*) for using the RPI as a controller for controlling the LED street light *(Liva Energy)*.
- **Industrial software and electrical schemes (*2016*):** Automatization of the pump station and cranes at *"Steel plant" (ArcelorMittal)*.
- **Software development:** In this project (*2014*), I was a team member in creating the first software on bosnian market for electricity trading (desktop app made in C#, MSSQL) *(Euro-Power)*.
- **Web development, embedded programming:** Project in *2015* was related to creating the database from the specific url. I used (*Nodejs*) for the web scrapping of the content and filling the database (*MySQl*) (*Freelance - for the client*).
- **Software development (*2013*):** Development of the system with coupled nonlinear differential equations for modelling the battery of the hybrid cars (*Modelon*).
- **Research:** *'Robot motion on a rough terrain'*, mentor doc. dr. Adnan Tahirović, Project guided by "Politecnico di Milano".
- **Research:** *'Reactive control of the mobile robot,using the danger field method'*, mentor doc. dr. Bakir Lačević.
- Active on edx.org and udemy.com .

Google Scholar Citations

There is an intenation to create a papers working on a project.

Books

A.Husaković, M. Čabaravdić. *Zbirka zadataka iz automatizacije*. Univerzitet u Zenici, 2019.

Acknowledgment *'Passivity – based Model Predictive Control for Mobile Vehicle Motion Planning'*, Adnan Tahirović, Gianantonio Magnani (2013).