

Marko Vejnović

(872) · 810 · 5248 contact@markovejnovic.com

www.markovejnovic.com

📧 marko.vejnovic.42 🌐 markovejnovic 📄 markovejnovic

822 Noyes Street, Evanston, Illinois 60201



EDUCATION

Northwestern University

Bachelors in Electrical Engineering

Bachelors in Computer Science

September 2019 - Spring 2023

3.64 GPA

United World College Changshu China

International Baccalaureate

August 2017 - May 2019

Overall Grade: 82.2%

EXPERIENCE

Floorcenter d.o.o.

Software Engineer

Jan. 2021 - Aug. 2021

Banja Luka, Bosnia & Herzegovina

- Created a proprietary solution for automating the labelling and tracking of individual wood boards in the manufacturing process.
- Enabled the company to compare different suppliers' overall final yield.
- Whole-stack application in *PHP* with *Laravel*, *Vue* and an app on *Android Native*.

Northwestern University, Center for Robotics and Biosystems

Undergraduate Research Assistant in Robotics

Jan 2020. - March 2020.

Evanston, Illinois

- Evaluated the performance of various design options in multiple projects that the department was working on.
- Performed research on achieving stable flight of an unbalanced drone.
- Designed & Assembled PCB Layouts.

UNAIING

Software Engineer

Jun. 2019 - Aug. 2019

Banja Luka, Bosnia & Herzegovina

- Simplified Architectural Labor in *Autodesk Revit* by creating a plugin for automatic thermal insulation marking.

Zoran Kuvać

Web Developer

Aug. 2019 - Sep. 2019

Banja Luka, Bosnia & Herzegovina

- Improved outreach and customer ease-of-contact by creating a website on *React* (www.zorankuvac.com).

PROJECTS

CM4 PoE+ RAID1 High Redundancy Low Power General Purpose Server

Sept. 2021 - Present

- A SATA1 IU high data redundancy general purpose server.
- Completely powered off of PoE+ with a total $P_{load} < 25.5W$.
- Easily clusterable.

DIY Gibson Flying V Clone

Jul. 2018

- A completely handmade Gibson Flying V.
- Custom, handwound AlNiCo pickups with custom accompanying passive electronics.

Ikup

Feb. 2018

- A successful *Java* & *Bootstrap* solution for managing the logistics of a shared kitchen in UWC Changshu China.

USB Arduino-based Portable Oscilloscope

Apr. 2016

- A Portable Oscilloscope, awarded with the Gold Prize on *Tesla Fest 2016*.
- Enables waveform analysis on the go paired with an Android device
- Application on *Android Native* and C++ on Arduino.

Automated Camera Slider

Mar. 2015

- A cheap and robust solution for the problem of camera motion in stop motion animation.
- Enables the animator to program the camera motions either on the built-in screen or through pairing with the industry standard software *Dragonframe*.
- Four degrees of freedom allow for various camera motion.

RESEARCH

The Frequency Response of the MXR Microamp Amplifier

July 2018

- Tested the MXR Microamp amplifier which is used as a guitar boost pedal.
- Expected a flat frequency response.
- Successful experiment with the resulting frequency response being flat in the operating range.

The Effect of Pickup Position on the Response of an Electric Guitar

October 2018

- Investigated the effects of pickup position on the frequency response of a guitar's harmonics.
- Automated detection of harmonic peaks.
- Inconclusive results likely due to a combination of inconsistent waveform deterioration and string-plucking, manual errors.

AWARDS

Northwestern Scholarship, Buffet Institute Grant, Davis UWC Scholarship

2019-2023

System for Organizing Small Aeroclubs

Silver Prize at *INOST*, Banja Luka 2017

USB Arduino-based Portable Oscilloscope

Gold Prize at *Tesla Fest*, Novi Sad 2016

Arduino Camera Slider

Silver Prize at *INOST*, Banja Luka 2015

Portable Science Experiments Coiffer

Gold Prize at *INOST*, Banja Luka 2014

ABILITIES

Natural Languages

English, Serbian, Croatian, Bosnian, German (intermediate)

Drawing, Modelling & Analysis

AutoCAD, Solidworks, EagleCAD, KiCad

Office Software

Microsoft Office, LibreOffice

General Languages

x86ASM, C, C++, C#, Objective-C, Java, Javascript, Python, PHP, Kotlin, Bash

Data Processing

Numpy, Scipy, SymPy, Matlab

Web Technologies

HTML, CSS, JS, Typescript, React, Flask, Vue, Laravel, Node.js, JQuery
REST, SOAP, HTTP

Mobile Technologies

Android SDK

Database Technologies

MySQL, PostgreSQL, SQLite

Data Description Technologies

XML, JSON, YAML

Typesetting Systems

L^AT_EX

Embedded Systems

Arduino, AVR, PIC (mikroC)

System Administration

Linux (intermediate), Windows (intermediate)

Design and Film Technologies

Photoshop, Illustrator, Audition, Premiere Pro

Desktop Technologies

GTK, Qt, Winforms, MFC

Tools

Git, Vim, POSIX

Manufacturing

Woodworking, General Workshop Handtool Use, Milling, 3D Printing