Đorđe Marjanović *February 10, 1998*

Last update on December 1, 2016

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Summary

I'm a passionate geek with a goal to improve myself and the world around me by learning and working on projects that could help people and myself.

At the age of twelve I've started creating small games in a software called "Game Maker". Since then I've learned what programming means and how to use such a useful skill.

In 2012 I've started learning programming (C/C++ and Pascal) and applying my knowledge to problem solving and many projects. Since 2013 I've been going to Petnica Science Center where I've learned and applied knowledge in trending technology such as Embedded systems and Machine Learning (Matlab). In 2014 I've started using Linux and working with web and android programming (Python, Java).

Now I am studying Elctrical Engineering and Computer Science, and I'm improving my knowledge by trying to ceep up whith current technological advances.

Experience

Petnica Science Center — Valjevo, Serbia

Attendant *Feb '13 – present*

Petnica Science Center is the biggest and, probably, the oldest independent nonprofit organization for extracurricular, informal science education in South Eastern Europe. As of my first year as a high school student, I attended seminars for Technical Sciences, Applied Physics and Electronics and Computer Science. I've worked on 3 projects over the past 3 years on the program for Applied Physics and Electronics:

2014 "Magnetic levitation using a Helmholtz coil"
2015 "Angle measurment using photoelements"
2016 "Localisation and reconstruction of the path using binary sensors on the ground"

As of Jun '16 I've worked as an assistant and menthor, where I held lectures and exercises to younger Petnica Attendants in the field of Applied Phyisics and Electronics and also Petnica Summer School. Now I am being considerd for a mentorship position for the Applied Physics and Electronics seminars.

Applied Physics and Electronics Club — Kragujevac, Serbia

Club leader *Jun '13 – present*

Applied Physics and Electronics Club is a student organisation of First grammar school of Kragujevac, founded in 2013. Whith few of my friends we've founded the club whit the goal to introduce science in the perspective of engineering. Since 2013 around a hundred highschoolers have gone through lectures and projects of their own in the fields of Electronics, Computer Vision, Machine Learning, Simulations, Signal Processing and many more. I've menthored many projects such as: "Robot for playing rock-paper-scissors", "Model of an elevator", "Stabilizing a ball on a beam (Ball & Beam)", "Stabilizing a ball on a plate (Ball & Plate)", "Classifying notes of a piano", "Distance measurement using a laser", "Laser harp", "Egg drawing CNC", "Chess playing robot" and many more.

Eurobot — Belgrade, Serbia

Engineer *April '16 – present*

Eurobot is a international amateur robotics contest open to teams of young people, organised either in student projects or in independent clubs. In 2016, with a few friends from school, we've built a functional robot in 2 weeks from scratch. In nov '16, I've joined APE.robotics as a Hardware and Software Engineer.

Telekom Android Contest — Belgrade, Serbia

Contestant *Nov '15*

Tlekom Android Contest is a private contest held by mts where groups of highschool students build an android application. My team won third prize (A mobile phone) with an application called "Morsenger". Morsenger is an android application used for people who have damaged vision which helps them send and recive messeges in morse code.

Contests — Serbia

Contestant *'11 – present*

Since my last years in middle school, I've participated in many contensts in the fields of Physics, Math, Programming, English laguage and Astronomy. Greatest achivment was the second Physics prize in the national competition. I've also participated in the national competition for Programming and Astronomy.

Regional center for young talents — Kragujevac, Serbia

Contestant — *'11 – '14*

Regional center for young talents is a national organisation that organises a series of competitions that include theoretical knowledge and practical projects. I've worked on 4 successful projects in the field of Physics: "Solar energy", "Process of colecting solar energy", "Magnetic localisation" and "Generating nanospun tissues" and won first national prize in 2014.

3D modeling seminar — Kragujevac, Serbia

Attendant — *'15 – '16*

The Universety of Kragujevac, Faculty of Engineering belongs to a group of the most distinguished and most prestigious scientific-educational institutions from the area of technical sciences. It organises yearly 3D modeling seminars, where they teach high school students essentials of 3D modeling ing software such as CATIA and Autodesk Inventor. There are also many CNC machines such as 3D printers on which the designed 3D model can be tested.

Other projects

With my spare time I've worked on many other small project with wich i was testing my knowledge in some field. Most notably I've worked on:

- Many games such as snakes, tetris, chess, Go, bascetball... (Java)
- Optimizing light source location for best use of a light boulb. (Octave)
- Chess AI (α-β pruning search algorithm). (Java)
- Character recognition with neural networks. (Matlab)
- History Map, a web application that could show how the world changed through time (failed because of a bad server) (HTML, php, postgresSQL, C++, mapnik...)
- Operational simulation of a 32-bit computer. (Logisim)
- Simulation of notions in electrostatics (such as electric field, potential field, equipotentials...). (Java)
- Compiler and simulator for picoComputer, an assembly-like programming language that is tought in my school. (C++17)

I've also implemented many algorithms in fields of Graphs, Searching, Machine Learning, Function Optimisation, Artifitial Intelligence...

Education

Prva kragujevačka gimnazija (First grammar school of Kragujevac) — Kragujevac, Serbia

Student — *20012 – 2016*

As the student in the Specialized Mathematics (SM) course, I've concetrated on technical sciences such as Computer Science and Electrical Engineering. As my final-year project, I've chosen the theme "Optimizing Algorithms", were i dwelved in the algorithms such as Gradient Descent, Genetic Algorithms and Particle Swarms.

Universety of Belgrade, School of Electrical Engineering — Belgrade, Serbia

Batchelor's degree student in Electrical Engineering and Computer Science — *2016 – present*

Skills

Excellent: C/C++/C++11

Good: Java, Python, Assembly, LaTeX, Hardware design

Basic: Bash, Matlab (Octave), mikroC, HTML, CSS, php

Languages: Serbian *(native)*, English *(fluent)*, French *(elementary)*

Interests

Programming, open source, software engineering, american football, Linux