Mihailo Grbić

Electrical and Computer Engineering Student

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Education

2018 - *present* | **Belgrade University, Faculty of Electrical Engineering**
Belgrade, Serbia

First year student, department of Electrical and Computer Engineering. GPA 10/10

2014 - 2018 | **Mathematical Grammar School**
Belgrade, Serbia

Graduated from Mathematical Grammar School, honors "D" class of top twenty students chosen by their entrance exam score and their accomplishments on competitions. GPA 4.85/5

2015 - 2018 | **Petnica Science Center**
Valjevo, Serbia

Attended seminars of Applied Physics and Electronics. Attended advanced lectures and workshops on the subjects of electronics, robotics, control systems, computer vision and machine learning. Authored 3 summer research projects.

Experience

May 2018 - *present* | **Petnica Science Center, Department of Applied Physics and Electronics**
Junior Assistant

Holds lectures and workshops on the subjects of programming, computer vision, and machine learning. Mentors student projects.

Extracurricular Activities

Sept. 2016 - Sept. 2018 | **Sekcija Primenjene Fizike i Elektronike Matematičke gimnazije (PFEMG)**
Founder and Head

- *Founded and lead a club of Applied Physics and Electronics at Mathematical Grammar School, aimed at prospective students*
- *Mentored student projects*
- *Held lectures and workshops on a wide range of subjects*
- *Managed the club and it's equipment and finances*
- *Organized the club's participation and it's displays at multiple science festivals, including Belgrade Science Festival and MakerFaire Vienna*
- *Contacted potential sponsors and raised over 5k$ worth of funds and equipment for the club*

Dec. 2018 - *present* | **Mathematical Grammar School, Computer Science Week**
Lecturer

Holds lectures and workshops on the subjects of computer vision and machine learning at the annual seminar.

Projects

July 2018 - Nov. 2018	**Pipelined FPGA architecture for filtering images with linear and adaptive median filter** Petnica Science Center *The goal of the project was to design and implement an FPGA architecture which applies linear and adaptive median filtering on images, with focus put on fast execution at the cost of high memory and logical units usage. The project was featured at 2018. Annual Petnica Conference and will be published in the 2018. edition of Petnica Science Journal.*
July 2017 - Nov. 2017	**Training database enlargement using Generative Adversarial Networks** Petnica Science Center *The goal of the project was to test the viability of using Generative Adversarial Networks (GAN) to enlarge training databases of classification machine learning problems. Implemented a Classifier Convolutional Neural Network for the Street View House Numbers problem, and a Deep Convolutional Generative Adversarial Network, using Python and Tensorflow. The project was featured at 2017. Annual Petnica Conference and was published in the 2017. edition of Petnica Science Journal.*
May 2017 - June 2017	**Digital Circuit Simulation** Mathematical Grammar School *The goal of the project was to make a digital circuit simulator (inspired by Logisim), to implement it using object oriented programming and to document the code fully. All basic logic gates were implemented, as well as wires, transistors, logical pins, clocks and displays.*
June 2018	**MaxiGO** RetailTech Hackathon *A phone app with the goal of "gamifying" the shopping experience by providing challenges and achievements which are rewarded with discounts and coupons.*
Sept. 2016	**SoilBuggy** CoderDojo Robotics Hackathon *A rough terrain robot Buggy which makes physical and chemical soil measurements and using machine learning determines the soil quality, as well as the best crop to grow on that soil.*

Honours & Awards

2015 - 2017 | **Serbian High School Competition Awards**

- *Republic Physics Competition - Second Prize (2015)*
- *Republic Physics Competition - Third Prize (2016)*
- *Republic Physics Competition - Third Prize (2017)*
- *Republic Informatics Competition - Third Prize (2015)*

July 2018 | **RetailTech Hackathon 3rd place**
ICT Hub, Delhaize Srbija

A 48-hour hackathon with the challenge of improving the in-store digital experience of Delhaize markets. Was part of a 4 member team. Our project MaxiGO won 3rd place in a competition of 11 teams.

April 2017 | **CoderDojo Pančevo Robotics Hackathon 1st place**
Coder Dojo Pančevo

A 48-hour hackathon aimed at high school students with the challange of making a creative and useful robot. Was part of a 3 member team. Our project SoilBuggy won 1st place in a competition of 7 teams.

December 2016 | **Decembarac Debate Competiton, Best Individual Speaker**
Open Communication, Faculty of Law

An annual, team, debate competition played by British parliament rules. Was part of a 2 member team, which made it to semi-finals. Was awarded the Best individual speaker award for wining the most speaker points in qualifications.

Courses & Certifications

May 2019 | **Stanford Machine Learning Course**
Coursera

Oct. 2018 | **VHDL and FPGA Development Online Course**
Udemy