MLADEN BAŠIĆ

- Belgrade, Serbia
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EXPERIENCE

Software Engineering Intern [*Spring 2021*]
Microsoft Developement Center Serbia　📅 Feb 2021 – May 2021

- Mixed Reality and AI team
- *Project: to be determined*

Assistant at Petnica Science Center
Department of Applied Physics and Electronics　📅 2018 – present

- Held lecture about Linear Algebra, Image Processinga and Natural Language Processing
- Held workshops in Physics Simulation, Digital Signal Processing and Natural Language Processing
- Supervised project in *Hybrid Model for Sentence Completion*

PROJECTS

Relative Camera Pose Estimation
Petnica Science Center Machine Learning Seminar　📅 summer 2020

- Developed a model for estimating relative change in camera position between two frames
- Model consisted of two siamese AlexNets and a fully connected layer which outputs relative translation and rotation
- Treining was done on car driving dataset

`Python` `PyTorch` `KITTI Dataset`

Automatic Extractive Summarization of Multiple Documents
Petnica Science Center　📅 summer 2018

- Multi-document extractive summarization
- Text ranking done using Recursive Neural Networks
- Sentance selection done using ROUGE metric with greedy approach and linear programming

`Python` `TesnorFlow` `DUC Dataset`

The Analysis of Ball Balancing Robot Control System
Petnica Science Center　📅 summer 2017

- Simulation of robot's physics and imperfect sensors
- Signal filtering done using Complementary and Kalman filter
- System stabilization done using PID and LQR controller

📄 `Paper` `MATLAB` `Python`

Word Recognition from Gyroscope Signals
Petnica Science Center　📅 summer 2016

- Built own database with gyrocsope recordings in different frequencies
- Gyroscope data recorded using *MicroPIC* board
- Word recognition done using Dynamic Time Warping method

📄 `Paper` `MATLAB` `MicroC`

EDUCATION

B.Sc. in Electrical Engineering and Computer science (expected)
University of Belgrade　📅 2018 – 2022

Signals and Systems Department
Ongoing GPA: 9.3 / 10

Grammar school
Special Mathematics class　📅 2014 – 2018

PROFESSIONAL SKILLS

Skill	Level
Python	●●●●●
MATLAB / Octave	●●●●○
C++	●●●●○
Bash	●●●○○
Git	●●●●○

LANGUAGES

Language	Level
English	●●●●○
Serbian (*native*)	●●●●●

FACULTY WORK

Undergrad Teaching Assistant
Object Oriented Programing Course　📅 2020

- Homework and final project grading
- Conducting oral examinations

Member of BeoAvia Team
Airbus Sloshing Rocket Workshop　📅 2020

- Developing controller for rocket with non pressurized liquid as load
- Developing lab equipement for testing of all relevant forces and moments acting upon the rocket

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Member of ETF Robotics group
Renesas MCU Rally Faculty team　📅 2019

- Developed physics simulation of model vehicle with sensors and localization
- DC motor testing and measurement

OTHER

Course Projects

- Handwritten Digit Recognision (Neural Network from Scratch) (MATLAB)
- Digital Circuit Simulator (C++)
- DataFlow Equation solver (C++)