MLADEN BAŠIĆ

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EXPERIENCE

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*

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

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

MATLAB   Simulink

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 – present

Signals and Systems Department
Ongoing GPA: 9.3 / 10

Grammar school
Special Mathematics class 📅 2014 – 2018
Graduation project: Genetic Algorithm

PROFESSIONAL SKILLS

Python ●●●●●
MATLAB / Octave ●●●●○
C++ ●●●●○
Linux ●●●○○
Bash ●●●○○
Git ●●●●○

LANGUAGES

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

OTHER

Course Projects

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

Science Fair Projects

- Automatic Checkers Table
- Self Playing Guitar
- Ball Chasing Robot
- Arduino Sunflower

Tech Confereces Attended

- RoboMac 2020 Self-driving robots competition
- Pie&AI Belgrade 2020 Events
- DesCon 2019: First place in *Capture the Flag* event
- BalCCon 2018 and 2019 (Volunteered)
- WonderlandAI 2019 (Volunteered)

SOFTSKILLS

Work Under Pressure   Responsibility

Fast learning   Team Work   Flexibility