MLADEN BAŠIĆ

Belgrade, Serbia
mladenbasic99@gmail.com
github.com/basicskill
linkedin.com/in/basic-mladen

EXPERIENCE

Assistant at Petnica Science Center

Department of Applied Physics and Electronics 2018 – present

- Held lecture about Linear Algebra
- Held workshops in Python programming, Physics Simulation and Digital Signal 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	●●●○○
x86 Assembly	●●○○○

LANGUAGES

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

OTHER

Course Projects

- Handwritten Digit Recognision (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

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

SOFTSKILLS

Work Under Pressure | Responsibility | Fast learning | Team Work | Flexibility