MLADEN BAŠIĆ

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EXPERIENCE

Machine Learning Intern

Microsoft Developement Center Serbia — Oct 2021 – Mar 2022

- Worked on a model for premium feature upselling based on user actions in Word Online
- Collaborated with software engineering team on feature extraction and model deployment
- Wrote queries for big data parsing from a preexisting database

Python | Sequence Classification | Kusto Query | Microsoft Office

Software Engineering Intern

Microsoft Developement Center Serbia — Feb 2021 – May 2021

- Improved camera head position estimation software by implementing a complementary filter on head tracking system from HoloLens2 and Azure Kinect's head localization software
- Developed software pipeline for synthetic camera calibration, testing and 3D pose estimation
- Ran experiments using real-world calibration data and tested quality of intrinsic calibration after an airplane travel simulation

Python | Camera Calibration | Mixed Reality

Teaching Assistant and Lecturer

pfe.rs — 2018 – present

- Held lectures in Linear Algebra, Image Processing and Natural Language Processing
- Held workshops in Physics Simulation, Digital Signal Processing, Natural Language Processing and Machine Learning
- Supervised project: *Hybrid Model for Sentence Completion and Bug Physics Simulation*

Python | Linear Algebra | Signal Processing | Machine Learning

PROJECTS

Relative Camera Pose Estimation

Petnica Science Center Machine Learning Seminar — summer 2020

- Developed a model that estimated relative change of camera position between two frames
- Model consisted of two identical AlexNets and a fully connected output layer which returns relative translation and rotation in quaternions
- Training was done on car driving dataset

Python | PyTorch | Computer Vision

Automatic Extractive Summarization of Multiple Documents

Petnica Science Center — summer 2018

- Multi-document extractive summarization done on news articles
- Text ranking done using Recursive Neural Network that traversed through the sentence tree and scored every n-gram leaf to root
- Sentence selection was realized using greedy approach on scored sentences, discarding ones that have a set percentage of similar words

Python | TesnorFlow | Natural Language Processing

EDUCATION

B.Sc. in Electrical Engineering and Computer science

University of Belgrade — 2018 – 2022

Signals and Systems Department
GPA: 9.1 / 10
Thesis: Medical Image Registration using Convolutional Autoencoders

PROFESSIONAL SKILLS

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

LANGUAGES

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

FACULTY WORK

Undergrad Teaching Assistant

Object Oriented Programing Course — 2020

- Homework and final project grading
- Conducting oral examinations

Member of ETF Robotics group

Renesas MCU Rally Faculty team — 2019

- Developed physics simulation of model vehicle with noisy sensors and localization
- DC motor testing and atribute measuring

OTHER

Hackathons

- SUMA MATF Hackathon: Pollution Prediction
  basicskill/matf-hackathon
- TUM-JA Hackathon: Crowdedness of Public Transport
  basicskill/tum-hackathon

Smaller Projects

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