VLADIMIR **MATIC, PHD**

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Vladimir has extensive experience in computer vision and machine learning, having worked on various projects across different organizations. His recent roles include managing and leading the development of hand gesture recognition, camera blockage detection, and augmented reality modules at Rivian, as well as developing a facial coding expert system at Eyesee. He has also contributed to research and development in self-driving vehicles, taught courses in data science and computer vision, and participated in post-doctoral research and industrial internships focusing on signal processing and software development.

EXPERIENCE

MAY 2024. – PRESENT

COMPUTER VISION CONSULTANT

I work in research and development for a leading behavioral insights and market research company. My focus is on building AI models to simulate state-of-the-art eye gaze tracking (e.g., EyeLink). I develop Vision Transformer models, saliency models, and perform statistical analyses to predict and better understand human gaze behavior.

MARCH 2023. – APRIL 2024.

MANAGER/TECH LEAD COMPUTER VISION, RIVIAN

Research and development of hand gesture recognition and camera blockage detection modules, as well as augmented reality features, for an infotainment platform, leveraging computer vision and machine learning techniques to enhance user interaction and safety. I am leading a team of Algo, System Software and Experience (Android apps) team.

MARCH 2020. – MARCH 2023.

MACHINE LEARNING AND COMPUTER VISION, EYESEE

Development of the Facial Coding expert system to decode the human behavior. The solution is used by world-wide known clients, such as Microsoft and Twitter.

2019. – MARCH 2020.

COMPUTER VISION RESEARCH ENGINEER, CONTINENTAL

I design a software for self-driving trucks and cars. I work on the components for 3D reconstruction, SLAM, Calibration and Camera Blockage.

2016. – 2018.

ASSOCIATE PROFESSOR AND VICE DEAN, SINGIDUNUM UNIVERSITY

I was teaching: Data Science, Machine Learning and Computer Vision/Deep Learning courses. I was a Vice-Dean and supervised teaching activities for 500 Software and Data Engineering students.

2015. – 2016.

POST-DOC INNOVATION MANDATE, KU LEUVEN, BELGIUM

I was granted a post-doc grant from Belgium government (225, 000 EURs, 11% acceptance). Together with an industrial mentor I worked on the creation of a spin-off company. The final product was a software developed in my research group (https://neoguard.net).

2007. – 2008. (5 MONTHS INTERNSHIP)

HILTI AD, LIECHTENSTEIN

I was developing algorithms for signal processing and systems control within Novel Mechatronic Department.

2007. (4 MONTHS INTERNSHIP)

SCIENTIFIC INSTITUTE MIHAILO PUPIN, SERBIA

I was working on the final diploma thesis: "Acoustic echo cancellation using adaptive filters".

EDUCATION

2010.-2014.

PHD STUDENT, KU LEUVEN, BELGIUM

I worked on the biomedical signal and image processing research. The goal of my research was to develop a decision support system for critically ill babies at neonatology department. My supervisors were Prof. Dr. Sabine Van Huffel (KU Leuven) Prof. Dr. Maarten De Vos (Oxford University).

2007.-2009.

MASTER OF SCIENCE, ELECTRICAL ENGINEERING, UNIVERYISTY OF BELGRADE

I studied at the department of Signals and Systems. My courses were related to signal processing and machine learning. GPA 9.71/10.00.

2003.-2007.

BACHELOR, ELECTRICAL ENGINEERING, UNIVERYISTY OF BELGRADE

I studied at the department of Signals and Systems. My courses were related to signal processing, control systems and machine learning. GPA 9.64/10.00, top 1.5% among 400 students.

SKILLS

- C++
- Python, PyTorch, sklearn, TensorFlow
- OpenCV (Python and C++)
- MATLAB
- Author and co-author of 30+ publications
- Computer Vision
- Machine and Deep Learning
- Signal and image processing
- Multi-Linear and Tensor algebra

CONSULTANCY PROJECTS

- Video-Audio Speaker identification for retail-based startup, 2018. 3 months
- Emotion recognition using Deep Learning project, 2017. 2 months
- Detection of Emotional states and activity recognition in infants. Innovation research, 2019. 3 months
- Time series analysis of crypto currency related signals, 2019. Coyote.ai startup, UK, 3 months
- Computer Vision – OpenCV blog http://datahacker.rs/

ACTIVITIES

In the last 10 years Vladimir was a scientist during his PhD. Then, he actively worked during his Post-Doc innovation mandate to establish a spin-off company. For three years, he was also a lecturer as a University Professor. He acted as a Data Science promotor as well as a University PR with several live TV interviews. He has organized several scientific Data Science related conferences in Belgium and Serbia. He leads a small team that works on a blog: http://dataHacker.rs. In free time, he enjoys sport activities and riding a snowboard during winter time.