Dr. Marko Mitic

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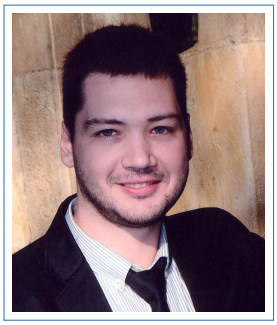

Curriculum Vitæ

Professional Experience

3/2014-present **Data Scientist**

Telenor, *Norwegian telecom company, Belgrade, Serbia*
Officially Best Employer in Serbia for 2014 and 2015.
Responsibilities:

- Data collection and consolidation in R & Excel, rapid analytics and reporting;
- Identification of revenue and traffic usage patterns, with determination of trends and causes;
- Execution of deep dive analysis using various statistical tests in R & SPSS. Recognition of atypical user behavior;
- Customer segmentation: clustering companies into micro segments for offering specific services or products (Upsell & X-sell);
- CLM analysis of user behavior with communication to Business Sales Account Managers;
- Proposing action plans to Account Managers and other team members, preparation and execution of different pilot projects;
- Communicating results to middle and top management as well as to non-technical colleagues.

2/2015-present **Assistant Research Professor** in Applied Machine Learning

University of Belgrade, *Faculty of Mechanical Engineering, Belgrade, Serbia.*
Responsibilities:

- Developing novel machine learning algorithms using methods such as Neural Networks, Regression Models, Evolutionary Computation, Reinforcement Learning, and Clustering Algorithms in R, Python and Matlab environment;
- Applying number of conventional machine learning algorithms like Linear/Logistic/Softmax Regression, traditional Neural Networks, Decision Trees, Support Vector Machines, Naive Bayes, Clustering methods, Evolutionary Algorithms, etc. for solving various engineering problems;
- Used quantitative methods to help robotic systems learn new motions shown by human demonstrators;
- Publishing research results in high-impact factor international journals & conferences in the area of artificial intelligence;
- Project management of several domestic projects supported by the Government of Serbia. Writing of proposals for different research initiatives and studies;

8/2015-present **Data Science Mentor**

Springboard *(San Francisco), online learning website,* https://www.springboard.com
Teaching industry professionals how to become Data Scientists.
Course syllabus:

- Programming in R;
- Data wrangling and manipulation;
- Probability and Statistics; Statistical testing and inference statistics;
- Exploratory data analysis and data story;
- Data analysis in depth: machine learning and statistical learning;
- Data visualizations;
- Capstone Project: Complete case study in Data Science;

1/2010-2/2015 **Data Analyst and Research Scientist**
Experience with various projects related to Predictive Modelling, Data Analysis and Algorithm Development.
Please see selected work in Data Analysis and Machine Learning (in Python and R languages) https://github.com/mmitic.

6/2014-2/2015 **Researcher and Part-time Lecturer**
University of Belgrade - Faculty of Mechanical Engineering.

12/2009-6/2014 **Research & Teaching Assistant and Part-time Lecturer**
University of Belgrade - Faculty of Mechanical Engineering.
Courses:

- **Decision-making methods** (MSc, in Serbian and in English). *Keywords:* Decision trees, Decision matrix and probability, Neural Networks, Practical projects on *Lego Mindstorms*^{TM} mobile robots;
- **Intelligent manufacturing systems** (MSc). *Keywords:* Neural Networks, Mobile robots, Extended Kalman Filter, A* search algorithm, Real-time control, Internal material transport, Project verification on *Lego Mindstorms*^{TM} mobile robots;
- **Axiomatic methods** (MSc). *Keywords:* Axiomatic Design theory, Analytical approaches in engineering design, Applications to real world problems;
- **Computer simulation and artificial intelligence** (BSc). *Keywords:* Simulation practice and theory, Discrete event simulation, Anylogic simulation package, Mobile robot motion models, Applications of Neural Networks.

2010-2014 **Supervision of undergraduate/graduate students**, University of Belgrade - Faculty of Mechanical Engineering. Supervised 3 Bachelor, 2 Master and 1 PhD project (20 students in total). Details available upon request.

Key Qualifications

- Proven results in real world predictive modelling and data analytics. Several years of industry and academic experience in these domains.
- Strong understanding of machine learning. Implemented a number of conventional machine learning algorithms (supervised and unsupervised).
- Invented, developed, implemented and tested a great number of new supervised and unsupervised learning algorithms for data modeling.
- Extensive knowledge in the applications of neural networks on different real world problems.
- Proven analytical and quantitative skills, creative and innovative approach to problem solving and analysis, and aspiration to continuously learn new concepts.
- Ability to share and transfer knowledge, and work in a team.
- Extensive teaching experience: taught five courses (one in English), more than 150 students overall.

Education

12/2009-4/2014 **PhD**, *University of Belgrade - Faculty of Mechanical Engineering*
Kraljice Marije 16, 11120 Belgrade, Serbia
Dissertation title: Empirical control of an intelligent mobile robot based on machine learning.
Keywords: Machine Learning, Computational Intelligence, Reinforcement Learning, Mobile robotics, Visual servo control, Learning from Demonstrations.

10/2003-12/2009 **Dipl.-Ing. (MSc equivalent)**, *Automatic Control Department,*
University of Belgrade - Faculty of Mechanical Engineering
Kraljice Marije 16, 11120 Belgrade, Serbia
Thesis title: Control of a 3 degree robot using P,PD,PD+ algorithms and adaptive theory.
Keywords: Automatic control, P,PD,PD+ control algorithms, Robot manipulator, Lyapunov stability theory.

Honors and awards

3/2015 Best Doctoral Dissertation Award defended in 2014 given by the **Belgrade Chamber of Commerce**.

4/2010-4/2013 PhD Scholarship of the Serbian Government. *The Ministry of Education, Science and Technological Development awards up to 10 best mechanical engineering students in the country each year.*

2009-2014 Outstanding student evaluations of teaching skills and dedication. *Average of grades for all courses over the teaching years is 4.9 out of 5. In total, more than 150 students during 4.5 years participated in rating.*

2005-2009 Scholarship of the Serbian Government for undergraduate/graduate students.

2004-2008 Several faculty recommendations for excellent results during studentship.

Computer skills

R, Python, Matlab **Expert**

Other Excellent in MS Office and LaTeX. Solid in SQL, SPSS, AutoCAD, Adobe Photoshop, HTML/CSS.

Professional services

2012-present **Reviewer for International Journals and Conferences**.

∘ *Applied Soft Computing* ∘ *Mathematical Problems in Engineering* ∘ *Engineering Applications of Artificial Intelligence* ∘ *Knowledge-Based Systems* ∘ *Expert Systems with Applications* ∘ *Neural Computing and Applications* ∘ *Journal of Intelligent & Robotic Systems* ∘ *Applied Mathematical Modelling* ∘ *International Journal of Advanced Robotic Systems* ∘ *Measurement Science and Technology* ∘ *Proceedings of the IMechE-Part C: Journal of Mechanical Engineering Science* ∘ *International Journal of Electrical Power & Energy Systems* ∘ *SciTechnol* ∘ *The 19th World Congress of the International Federation of Automatic Control 2014*

Languages

Serbian **Native speaker**

English **Proficient** *Excellent in reading, writing and speaking.*

Publications

Published more than 35 Journal (SCI-Thomson Reuters) articles, Conference papers, Technical reports and studies. My work has been published in high impact factor peer review journals like *Engineering Applications of Artificial Intelligence, Knowledge-Based Systems, Expert Systems with Applications, Soft Computing,* etc. More details and complete CV available upon request.

References

Available upon request.