Dr. Marko Mitic

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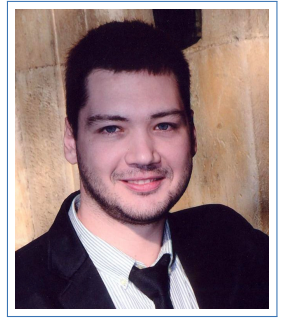
Curriculum Vitæ

Professional Experience

1/2010-present	**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*.
2/2015-present	**Assistant Research Professor** University of Belgrade - Faculty of Mechanical Engineering Kraljice Marije 16, 11120 Belgrade, Serbia.
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, Descrete event simulation, Anylogic simulation package, Mobile robot motion models, Applications of Neural Networks.

12/2009-present	**Administrative activities** at University of Belgrade - Faculty of Mechanical Engineering. Writing of project applications. Project management.
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

* Strong understanding of machine learning. Implemented a number of conventional machine learning algorithms (supervised and unsupervised).

* Experience with predictive modelling and data analytics. Several years of research in these domains.

* 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.

Research interests

Machine Learning, Computational Intelligence, Intelligent and Autonomous Systems.

Honors and awards

3/2015 <u>Best Doctoral Dissertation Award</u> 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 <u>150 students</u> 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**   *Use them every day.*

Other Solid in AutoCAD, Adobe Photoshop, HTML. Excellent knowledge of MS Office and LaTeX

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*
  - *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. More details and complete CV available upon request