Contact Data
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Education
PhD: UNSPMF, Serbia, PhD Computer Science, 2016 - 2021 – 10.00/10.00
      Doctoral Thesis: Negative Deep Learning
      Research topic: Artificial Intelligence, Deep Learning
MSc: UNSPMF, Serbia, MSc Software Engineering, 2014-2016 – 9.92/10.00
BSc: UNSPMF, Serbia, BSc Information Technologies, 2011-2014 – 9.11/10.00

Work experience
Research & Software Engineering
- Flaky communication Federated Learning strategy for distributed training in smart city environments MARVEL Horizon 2020 EU Project
- Predictive maintenance and anomaly detection component for robotic equipment Probotain sub-project Market4.0 Horizon 2020 EU Project (market40.eu)
- Graph embedding library for the GRASP (Graphs in Space: Graph Embeddings for Machine Learning on Complex Data) Artificial Intelligence project (graphsinspace.net)
- Privacy-enabled machine learning Industrial IoT anomaly detection component for the C4IIOT (Cyber security 4.0 – Protecting the Industrial Internet of Things) Horizon 2020 EU Project (c4iiot.eu)
- End-to-end data analysis platform for manufacturing, telecommunications and banking, I-BiDaaS (Industrial Big Data as a Service) Horizon 2020 EU Project (ibidaas.eu)
- Head software developer on AlfaEvid Android/Web work-time tracker (AlfaSoft, Ruma, Serbia, 2014-)
- Diatomic Horizon 2020 agriculture digital hubs project (diatomic.eu) and AgroSens national digital agriculture web platform (agrosens.rs) (BioSense Institute, 2017-2019)

Teaching
- University of Novi Sad – UNSPMF (2021-) – Assistant Professor
  - Courses: Deep Learning, Distributed Deep Learning, Scientific Programming, Mobile application development
- University of Novi Sad – UNSPMF (2016-2021) – Teaching Assistant
  - Courses: Artificial Intelligence 1, Deep Learning, Scientific Programming, Databases 1 & 2, Computer Networks, Python development, Business Software Development
- Faculty of Informatics, Novo Mesto, Slovenia – (spring 2018) – Open Source Software Development
- Continental Automotive Novi Sad (2018) – Python Software Development

Professional Skills
- Python, Java and C# languages, and their respective development tools and frameworks
- Machine Learning & Deep Learning skills
  - Artificial Neural Networks with PyTorch and TensorFlow
  - Distributed Training (horovod), Federated Learning (flwr), Differential Privacy Methods (diffprivlib)
  - Familiar with Apache Kafka, Model Endpoints (seldon)
  - ML Experiment Tracking Methods (guild, tensorboard)
  - Low Precision Training (tflite), Edge device (arm64) Training and Inference
  - Data preparation, augmentation and visualization Python libraries (pandas, numpy, plotly)
  - NVIDIA Deep Learning Fundamentals (certificate) and NVIDIA Multi-GPU Training (certificate)
- cloud computing (familiar with Kubernetes clusters, Microsoft Azure and RedHat OpenShift Cloud)
- object-oriented programming, relational databases, ORM, SQL
- front-end and back-end Web (API) development, cross platform mobile application development
- advanced Linux, source version control (git), application packaging (RPM, Docker), shell (bash, python) scripting, automation (ansible), virtualization (kvm)

Awards, scholarships, and studying abroad

- Erasmus+ Doctoral Student Exchange Program – six months studying at University of Coimbra, Portugal, Department of Electrical Engineering, mentor prof. dr. Nuno Lourenco, research field: machine learning, genetic algorithms (2020)
- Award for best teaching assistant (based on student rating) in a three-year period, University of Novi Sad, Faculty of Sciences, Department of Mathematics and Informatics (2019)
- Erasmus+ Summer School in Nijmegen, Netherlands, Radboud University – one-week summer school about writing better systematic literature reviews (2017)
- Scholarship for the extraordinarily gifted students – Ministry of education, science and technological development (2015)
- State student scholarship – Ministry of education, science and technological development (2013-2014)
- Gold Medal – Tesla Fest 2016, innovation fair, Novi Sad (Voice-enabled work-time tracking system)

Publications ([Google Scholar](#))

- Jakovetic, D., Bajovic, D., Sahu, A. K., Kar, S., Milosevic, N., & Stamenkovic, D. (2022). Nonlinear gradient mappings and stochastic optimization: A general framework with applications to heavy-tail noise. SIAM Journal on Optimization, SIOPT, 2022
- Bakhtiarnia, A., Milošević, N., Zhang, Q., Bajović, D., & Iosifidis, A. (2022). Dynamic Split Computing for Efficient Deep Edge Intelligence, ICML Workshop on Dynamic Neural Networks, ICML 2022, Baltimore, USA
- MILOŠEVIĆ, N., et al. BACS: A comprehensive tool for deep learning-based anomaly detection in edge-fog-cloud systems. In: 2022 30th European Signal Processing Conference (EUSIPCO). IEEE, 2022. p. 1097-1101.
- Bravos, George, et al. "Cybersecurity for industrial Internet of Things: architecture, models and lessons learned." IEEE Access 10 (2022): 124747-124765.
- MILOŠEVIĆ, N., RACKOVIĆ, M. (2020) Synergy between traditional classification and classification based on negative features in deep convolutional neural networks. Neural Computing and Applications, November 2020, doi: 10.1007/s00521-020-05503-4
- ARAPAKIS et al., "Towards Specification of a Software Architecture for Cross-Sectoral Big Data Applications," 2019 IEEE World Congress on Services (SERVICES), Milan, Italy, 2019, pp. 394-395. doi: 10.1109/SERVICES.2019.00120
- MILOŠEVIĆ N.., RACKOVIĆ, M. (2019) Classification based on missing features in Deep Convolutional Neural Networks, Neural Network World Journal (University of Prague) Volume 29 pp. 221-234 doi: 10.14311/NNW.2019.29.015
- SUKUR, N., MILOŠEVIĆ, N., PEŠIĆ, S., KOLEK, J., RAKIĆ, G., & BUDIMAC, Z. First Results of WCET Estimation in SSQSA Framework.

Conferences

- Data Science Conference 2022 (DSC2022) – Belgrade (tutor, workshop on Tiny Machine Learning)
- PSSOH 2021 – University of Belgrade - School of Electrical Engineering (speaker, paper, "Open-source software for Computer Science Education")
- DSC (Data Science Conference) 2021 – Belgrade (speaker, Workshop on Neural Style Transfer with
- TensorFlow)
- EURO 2021 – 31st European Conference on Operational Research, Athens, Greece (speaker, "Towards more robust neural network models with Negative Deep Learning")
- PySer 2019 (Python Serbia Conference), (speaker, "Witchcraft, Sorcery and Neural Style Transfer")
- EuroPython 2019, Basel, Switzerland (speaker, "Classification Based on Missing Features in Deep Convolutional Neural Networks")
- DevConf.cz 2018, FIT, Brno, Czech Republic (speaker, "Fedora in Education")
- PySer 2018 (Python Serbia Conference), (speaker, "Gentle Introduction to Neural Networks with TensorFlow and Keras")
- DevConf.cz 2017, FIT, Brno, Czech Republic (speaker, ".NET Core on Fedora")
- BalCCon 2017, Novi Sad (attendee, volunteer – Fedora Project, speaker – "Fedora in Education")

- Sinergija 2016, Belgrade (Microsoft) (speaker, "10 .NET open-source libraries you have to try")
- Tarabica 2016, University Singidunum Belgrade – (speaker, ".NET development tool-chain on Linux")
- BalCCon 2016, Novi Sad (attendee, volunteer – Fedora Project)
- Fedora {24, 25, 26, 27, 29, 31, 37} Release Party, Novi Sad – Faculty of Sciences (organizer, speaker)

Other

Contributor to: PyTorch (#26421, #21745, #21743, #23233, #16806), Fedora Linux Project (packager)

FSF (Free Software Foundation) and PSF (Python Software Foundation) member