

Stevo Racković

Data Scientist, Researcher at IST

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I work as a machine learning researcher, primarily solving optimization problems in the field of facial animation. Additionally, work on projects that develop Reinforcement Learning for task offloading, and Recommendation Systems for health services. I have great interest in machine learning and deep learning in general, and in particular I am excited about applying cutting-edge technology advances to everyday problems with the goal of improving living standards and easing daily routines.

Experience

- 2019–present **Early Stage Researcher**, *Institute for Systems and Robotics, Instituto Superior Técnico*, Lisbon
- Partner within TaRDIS Project with NOVA University
 - Research on task offloading in network of machines
 - Developing deep reinforcement learning agents in PyTorch
 - Hands-on experience with Python (PyTorch, NumPy, SciPy, Scikit-Learn, Pandas)
 - Research in distributed optimization and machine learning models with application in the animation industry.
 - Cooperation with 3Lateral Studio, Epic Games.
 - Developing custom optimization algorithms in Python
 - Testing in Python and Autodesk Maya
 - Part of Marie Curie Actions - BIGMATH.
- 2018–2019 **Junior Researcher**, *Faculty of Sciences, University of Novi Sad*, Novi Sad
- Developing models for distributed implementation of the common machine learning algorithms.
 - Working in Python with PyCOMPSs, Scikit-Learn, NumPy
 - Part of a team working on IBiDaaS H2020: Industrial-driven big data as a self-service project.
- Summer 2017 **Intern**, *BIOSENSE Institute*, Novi Sad
- Developing a classifier to accurately recognize the cultures planted in specific fields using satellite images.
 - Deep Convolutional Neural Networks with Keras
 - Remote Sensing Lab.

Education

- 2019–present **PhD in Statistics and Stochastic Processes**, *Instituto Superior Técnico*, Lisbon
- The curriculum covers machine learning, optimization, and statistics with a high demand for both theoretical and practical skills.
 - Thesis: *Distributed optimization of biokinetic models based on large 4D sequences*.
 - The goal is solving large-scale optimization problems in the face animation of video games. The main focus is on a distributed optimization setting for reducing computational costs.
- 2016–2018 **Master in Applied Mathematics**, *University of Novi Sad*, Novi Sad
- 2013–2016 **Bachelors in Applied Mathematics**, *University of Novi Sad*, Novi Sad

Languages

Serbian Native Speaker
English Fluent
Portuguese Intermediate

Skills

Technical

Python with TensorFlow and PyTorch, Microsoft Office, MySQL, Autodesk Maya

Conceptual

Problem-solving, Machine Learning with deep learning, Data analysis, Optimization, Statistics

Publications

"Clustering of the Blendshape Facial Model", S. Racković, C. Soares, D. Jakovetić, Z. Desnica, R. Ljubobratović, 2021, 29th European Signal Processing Conference (EUSIPCO)

"A Hybrid Compartmental Model with a Case Study of COVID-19 in Great Britain and Israel", G. Malaspina, S. Racković, F. Valdeira, 2023, Journal of Mathematics in Industry

"A Majorization–Minimization-based Method for Nonconvex Inverse Rig Problems in Facial Animation: Algorithm Derivation", S. Racković, C. Soares, D. Jakovetić, Z. Desnica, 2023, Optimization Letters

"Distributed Solution of the Blendshape Rig Inversion Problem", S. Racković, C. Soares, D. Jakovetić, 2023, SIGGRAPH Asia 2023 Technical Communications

"Extreme Multilabel Classification for Specialist Doctor Recommendation with Implicit Feedback and Limited Patient Metadata", F. Valdeira, S. Racković, V. Danalachi, Q. Han, C. Soares