Full name: Nikola Ružić
Position: Junior Research Assistant
Institution: School of Electrical Engineering
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Area of interests: Robotics, Human-Robot Collaboration, Deep Reinforcement Learning, Machine Learning

Education

2024-present Ph.D. student, Electrical Engineering and Computer Science, School of Electrical Engineering, University of Belgrade, Serbia, Supervisor: Prof. Kosta Jovanovic.

2023-2024 MSc, Electrical Engineering and Computer Science, School of Electrical Engineering, University of Belgrade, Serbia. (GPA 10/10)

2019-2023 BSc, Electrical Engineering and Computer Science, School of Electrical Engineering, University of Belgrade, Serbia. (GPA 8.78/10)

Experience

2024-present Junior Research Assistant at the Robotics laboratory at the School of Electrical Engineering, University of Belgrade, Serbia.

2023-2024 Student Teaching Assistant at the Robotics laboratory at the School of Electrical Engineering, University of Belgrade, Serbia.

2023-2024 Software Engineer at the Institute for Cardiovascular Diseases Dedinje, Belgrade, Serbia.

2020 Junior Teaching Assistant at the Petnica Science Center (Physics seminar), Petnica, Serbia.

Internships

2023 Research for bachelor thesis - Internship at the Robotics laboratory at the School of Electrical Engineering, University of Belgrade, Serbia.

Conferences

- Malik, S., **Ruzic, N**., Khonji, M., Jovanovic, K., Dias, J., Knezevic, N., and Seneviratne, L., 2025. Optimizing Multi-Robot Autonomous Crop Collection. The 34th International Conference on Robotics in Alpe-Adria-Danube Region (RAAD 2025 Belgrade, 18-20 June 2025).
- **Ružić, N**., Ćosić, I., Klasanović, D., Jugović, L., Knežević, N., and Jovanović, K., 2024. Path Replanning and Collision Avoidance in Collaborative Human-Robot Waste Sorting. 11th International Conference on Electrical, Electronic and Computing Engineering (IcETRAN 2024 Nis, 3-6 June 2024).
- Klasanović, D., Jugović, L., **Ružić, N**., Bečanović, F., and Knežević, N., 2024. Application and Optimal Design of a Soft Robotic Gripper for Grasping Objects of Arbitrary Shape. 11th International Conference on Electrical, Electronic and Computing Engineering (IcETRAN 2024 Nis, 3-6 June 2024).

Participation in projects

2024-present Hierarchical Reasoning for Enhanced Integrated Autonomy: Addressing Uncertainty in Heterogeneous Robotic Systems for Logistics and Agriculture Applications - HARBOT;

2023-present Modular and versatile collaborative intelligent waste management robotic system for circular economy - CircuBot; Grant ID 6784; Funding body: Science Fund of the Republic of Serbia; Green Program of Cooperation between Science and Industry;

2023-2024 FootVascuScan: Developed and applied signal processing techniques to thermograms of patient's feet, aiming to identify patterns and features that could assist in medical diagnostics.

2023-2024 Scan3DX: Developed a modified Multiscale Unet model in PyTorch aimed at coronary artery segmentation.

2023-2024 Developed machine learning models for data analysis and disease outcome prediction based on the tabular data obtained at the Institute for Cardiovascular Diseases Dedinje.