Branislava Jankovic

PhD Student at Mohamed bin Zayed University of Artificial Intelligence (MBZUAI)
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Personal Profile

Date of Birth: 26.08.1998
Place of Birth: Ruma, Republic of Serbia
Nationality: Serbian National
Languages: Serbian - native, Russian - fluent, English - fluent

Biography

I am an incoming PhD student in Machine Learning at Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), United Arab Emirates, having officially received an offer to continue my studies after completing my MSc in Computer Vision at the same institution. I hold a Bachelor's degree in Radiophysics and Electronics from the State University of Nizhni Novgorod, Russia, where I graduated with honors and a GPA of 4.76/5.00.

My master's research focused on real-time disaster management using UAV-based aerial image classification and metaverse-enhanced task offloading in space-air integrated networks. For my PhD, I am transitioning toward computational biology in agritech, with the goal of leveraging AI to address critical challenges in sustainable agriculture and food systems.

My work spans AI-driven applications in agriculture, smart cities, and medical imaging, grounded in a strong foundation in computer vision, IoT, and neural networks. Proficient in Python, C++, PyTorch, and optimization techniques, I am committed to developing resource-efficient, intelligent systems that deliver real-world impact in sustainability, healthcare, and agriculture.

Education

2025 - present: Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, United Arab Emirates

PhD in Machine Learning
Full sponsorship
Advisor: Natasa Przul

2023 - 2025: Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, United Arab Emirates

Masters of Science in Computer Vision
Full sponsorship
Advisor: Mohsen Guizani
GPA 3.75/4.00

Research Interest: Real-time Disaster Management through UAV-based Aerial Image Classification and Metaverse-Enhanced Task Offloading in Space-Air Integrated Networks.

Key subject areas:

- Foundations of Artificial Intelligence
- Human and Computer Vision
- Geometry for Computer Vision
- Mathematical Foundations of AI
- Visual Object Recognition and Detection
- Medical Imaging: Physics and Analysis

2022 - 2023: State University of Nizhni Novgorod named after N.I. Lobachevsky (UNN), Nizhni Novgorod, Russian Federation

Masters of Science in Artificial Intelligence (1st year)
Full sponsorship
GPA 4.83/5.00

Key subject areas:

- Machine Learning
- Deep Learning
- Reinforcement Learning
- 3D Computer Vision

- Algorithms and Statistics
- C++ and Python

2022: IELTS Band 7, British Council, Belgrade, Serbia

2018 – 2022: State University of Nizhni Novgorod named after N.I. Lobachevsky, Nizhni Novgorod, Russian Federation
Bachelor of Science in Radiophysics and Electronics
Full sponsorship
GPA 4.76/5.00 (conferred with honors)

Thesis: Development of a system for integral assessment of the states of studied objects based on analyzing their images using artificial neural networks.

Key subject areas:
- Analytic Geometry
- Statistics and Probability
- Vector and Tensor Analysis
- Project Management
- Mathematical Analysis
- Linear Algebra
- Differential Equations
- Entrepreneurship & Innovation

Experience

August 2025 – December 2025: MBZUAI, Abu Dhabi, UAE
- TA assistant for the Undergrad Entrepreneurship course (GE1010).

April 2024 – June 2024: Exafy, Abu Dhabi, UAE
- Designed a nutrition recommendation system for the Vitana project, applying AI to provide tailored health recommendations.
- Developed and implemented a multi-agent chatbot for the Pixlip project to streamline exhibition planning and generate custom design layouts.
- Collaborated on cross-functional tasks to enhance user experience and optimize project outcomes.

September 2017 – June 2023: Laboratory of Physical Fundamentals and Wireless Technologies, Nizhny Novgorod, Russia
- Designed and developed innovative IoT solutions, integrating AI for enhanced functionality and real-time data processing.
- Automated key physical processes, optimizing efficiency and reducing manual intervention through advanced programming techniques.
- Mentored and guided students, providing support and insights on AI and IoT projects to foster learning and skill development.

June 2019 – October 2019: Promis JSC, Nizhny Novgorod, Russia
- Managed sales operations and client relationships as a Sales Manager, focusing on customer acquisition and retention in the Balkan region.
- Acted as a Translator for Balkan clients, ensuring clear communication and understanding of product offerings and services.

Projects

2023, MBZUAI, Abu Dhabi, United Arab Emirates
Analyzing denoising techniques and their impact on pneumonia detection
- **Analyzed and optimized** denoising techniques to enhance pneumonia detection accuracy using various classifiers; conducted experiments to evaluate the impact on medical image clarity

2023, MBZUAI, Abu Dhabi, United Arab Emirates
Keypoint Face Detection and Emotion Detection
- **Developed** a Python application for **real-time keypoint face and emotion detection** using CNN architecture and Template Matching, improving detection efficiency for multi-use applications

2023, UNN, Nizhny Novgorod, Russian Federation
Science Box-Physical World (supported by the Russian Innovation Support Fund)
- **Engineered** a **camera monitoring system** for dynamic physical experiments, utilizing the Orange Pi

platform, which achieved high-precision observation and control through a custom Qt interface

2022, UNN, Nizhny Novgorod, Russian Federation

Autonomous Intelligent Vision Sensor for Plant Disease Recognition

- **Built** an autonomous intelligent sensor for **tomato disease recognition**, integrating Orange Pi and Alterozoom, enabling proactive plant health monitoring in agriculture

2020, UNN, Nizhny Novgorod, Russian Federation

Distributed network system of microreactors for Smart Cities

- **Designed and deployed** a distributed network of microreactors for Smart Cities, allowing on-demand production based on reagents with real-time control via NodeMCU and Alterozoom, enhancing efficiency in resource utilization

2019, UNN, Nizhny Novgorod, Russian Federation

The smart greenhouse

- **Optimized greenhouse automation** for diverse plant growth, utilizing a NodeMCU platform with sensors and a local server for intelligent monitoring and control through Alterozoom

2018, UNN, Nizhny Novgorod, Russian Federation

The IoT platform for conducting laboratory work for a physics course

- **Digitalized physics laboratory work** for kinematics studies by creating an IoT platform with Arduino, allowing remote experiment control and real-time sensor data monitoring

Publications

- Jankovic, B., Jangirova, S., Ullah, W., Khan, L. U., & Guizani, M. (2025). *UAV-Assisted Real-Time Disaster Detection Using Optimized Transformer Model*. Accepted at Symposium on Computers and Communications (**ISCC**)
- Jangirova, S., Khan, L. U., Jankovic, B., Ullah, W., & Guizani, M. (2025). *Joint Communication and Sensing in Metaverse over UAVs: A Deep Reinforcement Learning Approach*. Accepted at Symposium on Computers and Communications (**ISCC**)
- Jangirova, S., Khan, L. U., Jankovic, B., Ullah, W., & Guizani, M. (2025). *Efficient Aerial Fire Detection on Resource-Constrained Devices Using Cross-Architecture Knowledge Distillation*. Accepted at International Wireless Communications & Mobile Computing Conference (**IWCMC**)
- Vayani, Ashmal, et al. "All Languages Matter: Evaluating LMMs on Culturally Diverse 100 Languages." arXiv preprint arXiv:2411.16508 (2024). Accepted at Conference on Computer Vision and Pattern Recognition (**CVPR**)

Google Scholar: https://scholar.google.com/citations?hl=en&user=j0ZsRaYAAAAJ

Awards and Achievements

2023 Students Startup, Russian Innovation Support Fund
2021 Huawei Scholarship Winner
2020 Huawei Scholarship Winner

Leadership and Extra-curricular Activities

2025 Candidate Weekend Student Coordinator, MBZUAI
2024 Ugrip student mentor, MBZUAI
2024 GSCs Public Relations Coordinator, MBZUAI
2024 President of the UAE Branch, The Organization of Serbian Students Abroad
2022 Vice President of International Students Club, State University of Nizhni Novgorod
2019 Mentor at the Educational Program "Our Class - AtomClass," Crimea
2019 Mentor at Winter School "Internet of Things in a Personal Educational Environment ECOIMPACT

Skills

Technical skills: Python, C++, Matlab, Tensorflow, Pytorch, Docker, git, Optimization, IoT, Automation, Circuit Schematic Design
Other skills: Emotional resilience, communication, people management, data analytics, critical/logical & creative thinking

References

Dr. Mohsen Guizani
Professor of Machine Learning
Mohamed bin Zayed University of Artificial Intelligence
Email: mohsen.guizani@mbzuai.ac.ae

Dr. Mohammad Yaqub
Professor of Computer Vision
Mohamed bin Zayed University of Artificial Intelligence
Email: mohammad.yaqub@mbzuai.ac.ae