

Aidar Alimbayev

Abu Dhabi, Masdar City – 020000 – United Arab Emirates

✉ +971 55 246 83 06 • ✉ aidar.alimbayev@mbzuai.ac.ae

🌐 aidaralimbayev.github.io • 💬 aidar-alimbayev • 📚 AidarAlimbayev
Google Scholar Profile

Research Interests

Machine Learning, Material Science, Quantum Physics, Graph Neural Networks, Physical Informed Neural Networks, Healthcare Informatics, IoT Systems, Embedded Systems Design

Education

Mohammed bin Zayed University of Artificial Intelligence

Abu Dhabi, UAE

PhD in Machine Learning

2024–current

Thesis: *Materials Science and Machine Learning* | Supervisor: Dr. Martin Takac

The Bonch-Bruevich St. Petersburg State University of Telecommunications

Russia

Master in Technologies

2015–2017

Department of Radiotechnologies of Communication

S. Seifullin Kazakh Agro Technical Research University

Astana, Kazakhstan

Bachelor in Technologies

2010–2015

Radio Engineering, Electronics and Telecommunications

Research Experience

Texas A&M University

Texas, USA

Visiting Scholar

Aug–Dec 2022

Department of Electrical & Computer Engineering | Advisor: Prof. Ulisses Braga-Neto

○ Developed Physical Informed Neural Networks (PINNs) for complex systems

○ Implemented Stacked Generalization with Particle Swarm Optimization

○ Funded by the Shakhmardan Yessenov Foundation

Ministry of Education & Science Research Grant

Kazakhstan

Research Assistant

Aug 2021–Dec 2022

Project: *Epidemiology and Forecasting of Infectious Diseases Using Healthcare Data and ML*

○ Prepared and analyzed large-scale healthcare datasets

○ Evaluated ML algorithms for disease prediction and mortality forecasting

The Bonch-Bruevich St. Petersburg State University

Russia

Leading Researcher

May 2016–Jun 2017

Scientific and Educational Center "Technologies of Information-Educational Systems"

○ Authored research papers, reports, and technical reviews on automation systems

○ Developed devices, test stands, and conducted training courses

Professional Experience

Nazarbayev University, PI "NURIS"

Astana, Kazakhstan

Electronics Engineer

Jun 2018–Aug 2021

○ Designed and assembled circuits for simulation and verification testing

○ Prepared PCB layouts with schematic capture and simulation

○ Maintained documentation and procedural guidelines

S.Seifullin Kazakh Agro Technical University

Astana, Kazakhstan

Teaching Assistant

Sep 2017–May 2018

Department of Radio Engineering, Electronics and Telecommunications

- Supported faculty in course management and student engagement
- Led capstone projects for graduating students
- Enhanced learning experience through hands-on labs

S.Seifullin Kazakh Agro Technical University

Engineer & Laboratory Manager

Department of Energy

- Maintained electronic laboratories and equipment
- Assisted professors in coursework and laboratory sessions
- Provided cross-functional support for faculty and students

Astana, Kazakhstan

May 2013–Aug 2015

Selected Publications

2023: **Alimbayev, A.**, Zhakhina, G., Gusmanov, A., et al. "Predicting 1-year mortality of patients with diabetes mellitus in Kazakhstan based on administrative health data using machine learning." *Scientific Reports*.

2022: Gusmanov, A., Zhakhina, G., Yerdessov, S., Gaipov, A., **Alimbayev, A.** "Review of the research databases on population-based Registries of Unified electronic Healthcare system of Kazakhstan (UNEHS)." *International Journal of Medical Informatics*.

2021: Mirmanov, A., **Alimbayev, A.**, Baiguanysh, S., et al. "Development of an IoT platform for stress-free monitoring of cattle productivity in precision animal husbandry." *Advances in Science, Technology and Engineering Systems Journal*, 6(1), 501-508.

2019: Mirmanov, A.B., Nabiev, N.K., **Alimbayev, A.S.**, Zhanturin, R.M. "Impact of IoT technologies on devices for determining the weight of cattle." *Trends in the development of science and education*, (55-3), 28-35.

2017: **Alimbayev, A.S.**, Uss, V.S., Mirmanov, A.B., Shumakov, P.P. "Test stand for prospective mobile power-supply sources." *2017 International Siberian Conference on Control and Communications (SIBCON)*, pp. 1-3. IEEE.

Technical Skills

Programming: Python (NumPy, Pandas, scikit-learn, TensorFlow), C/C++, MATLAB, Octave, Linux, Bash

Tools: LaTeX, Simulink, LabVIEW, Jira, Git

CAD & Design: Altium Designer, EagleCAD, EasyEDA, Multisim, AutoCAD, Fusion 360

Areas: Machine Learning, Quantum Physics, Data Analytics, Embedded Systems, Electronics Design, IoT, Signal Processing

Languages

Kazakh: Native

Russian: Native

English: Fluent, IELTS 6.5

Spanish: Beginner

Honors & Awards

2022: Shakhmardan Yessenov Foundation Fellowship for visiting scholarship at Texas A&M University

Personal Interests

Rowing, Running (Marathon 42.2 km in 3:58), SwimRun, University Dragon Boat Team Manager