

Zhansaya Amangeldiyeva

Skills

Machine Learning, Reinforcement Learning, Data Analytics, Business Management, Matlab, Python, Arduino, NetLogo, AutoCAD, Origin lab, Microsoft Office, Unity
Others: Multichain, Blockchain, Cybersecurity, Wireless communication (LoRa, WiFi, etc.)

Education

University of Genova, Italy (Nov 2023 – Nov 2026)

JOINT DOCTORATE IN INTERACTIVE AND COGNITIVE ENVIRONMENTS (JD ICE)

Majors: Wireless Security and Communication, Localization, IoT devices, Chirpstack, LoRaWAN, OMNeT++ simulation.

Queen Mary University of London, UK (Apr 2025 – Aug 2026)

JOINT DOCTORATE IN INTERACTIVE AND COGNITIVE ENVIRONMENTS (JD ICE)

Majors: Wireless Security and Communication, Localization, IoT devices, UAV, Reinforcement learning, AI, Dataset, Anomaly detection.

University of Genova, Italy (Oct 2021 - Oct 2023)

Master of Science on Engineering Technology for Strategy and Security

Majors: Modelling and Design of Complex Systems, Business Management, Operations Research, Autonomous Agents in Games, Computational Intelligence

Al-Farabi Kazakh National University, Kazakhstan (Sep 2016 - July 2020)

Bachelor's Degree of Technical Physics, CGPA: 3.45

Majors: Main branches of physics, foreign languages (English, Russian), ICT, 3D Modelling, Mathematical analysis, Heat and mass transfer

Student Mobility Program: ITMO University, Russia (Sep 2018 – Jan 2019)

Experience

**KazNU, laboratory cryotechnology, Almaty, Kazakhstan Aug 2019 – June 2020 Laboratory assistant/
Junior Engineer**

Development and creation of a cryogenic-pneumatic installation
Investigation of the launch of reconnaissance and targeting devices
Using the AutoCAD and Origin lab programs while working
Working with cryopreserved nitrogen

Achievements:

- Determined characteristics of a cryogenic-pneumatic installation for launching reconnaissance and targeting (fragile) devices with various parameters
- Published research paper: Mathematical modelling of the cryogenic-dynamic start-up process in a pneumatic installation (2020)

Link: <https://iopscience.iop.org/article/10.1088/1742-6596/1661/1/012092>

- Participated in a research competition and took first place

Consiglio Nazionale delle Ricerche, Genoa, Italy June 2022 - present Internship Trainee/ Research Fellow

Analyzing security of Internet of Things. Doing research for LoRa, LoRaWAN, WIFI, Blockchain.

Responsibilities include:

- Setup private blockchains and using JSON-API commands
- Doing analyses for LoRa and LoRaWAN attacks
- Understanding wireless communication
- Working with Python, JavaScript, bash scripts, Go, etc.
- Programming with Arduino or Raspberry Pi
- Implementing some cyber attacks
- Working with operating systems and networking protocol

Achievements:

- Published technical report on ESP-01 Programming Instructions Using the Arduino IDE in CNR (2022)
- Implemented phishing attacks, DNS tunneling

Queen Mary University of London, London, UK Feb 2026 - present Research Assistant

Doing research for LoRa, LoRaWAN, satellite, TinyGS project.

Responsibilities include:

- Setup TinyGS ground station.
- Doing analyses for different antenna types.
- Collecting and analyzing packets. Link budget
- Working with Python, MQTT, CSV.

Internships:

Burgylau Petroleum Limited (May-June 2018)

Open Almaty (Public service) (November 2019)

Certifications:

- School of Public Service of the city of Almaty (2019)
- Developing Leadership day – AIESEC (2019)
- The first step Korean (Coursera) (Nov 2020)
- 11th NATO Modelling & Simulation Basic Course – NATO M&S COE (Nov 2021)
- LoRa and LoRaWAN for the Internet of Things – Udemy (Jan 2024)
- Environmental sustainability of ICT at the University of Genoa: 24 hours (8 credits) by Giovanna Sissa
- Reviewing in the Sciences – Web of Science (Feb 2025)
- Research Integrity – Epigeum (May 2025)
- Fundamentals of Reinforcement Learning – University of Alberta (Sep 2025)
- Problem Solving, Python Programming, and Video Games – University of Alberta (Sep 2025)
- Drone and model aircraft A1 and A3 sub category – European Union Aviation Safety Agency (Mar 2025-2030)
- Drone and model aircraft A1 and A3 sub category – UK Civil Aviation Authority (Feb 2026-2031)

Summer school and Conference:

- MLCC-Machine Learning Crash Course 2024, June 25-28, 2024 (20h), Genoa, Italy

- Summer School on Security and Privacy in the Age of AI, 10-13 September 2024 (28h), Leuven, Belgium
- 12th International School on Deep Learning, July 21-25, 2025 (40h), Porto, Portugal
- The Things Conference 2024 is scheduled for September 25-26
- International Conference on Intelligent Technology, System and Service for Internet of Everything (ITSS-IoE 2025) will be scheduled for October 27-28, Wolverhampton, UK.