

# AYANA MUSSABAYEVA

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**Industry:** AI/ML leader with experience across computer vision, fraud detection and applied ML organization building; led teams and built multiple AI functions from scratch

**Research:** PhD researcher, specializing in fundamental machine learning and its applications in neuroscience and others

**Society:** Co-founder of DSML.KZ, the largest ML community in Central Asia

## LEADERSHIP AND COMMUNITY

**DSML.KZ, Co-founder**

February 2020 – Present

- Helped build DSML.KZ into the **largest ML community in Central Asia (10,000+ members)**, combining research, hiring, and community programming.
- Founded IT Jobs KZ and helped grow related channels including the main news channel and the AI/ML jobs board, together serving **20,000+** subscribers across formats.
- Organized offline events for **250+** attendees, hosted research seminars, and mentored community members.

**International Olympiad in AI (IOAI), International Host Committee**

April 2026 – August 2026

- As a member of the IOAI 2026 International Host Committee in Kazakhstan, contribute to host committee formation, task finalization, and competition deployment.

## INDUSTRY EXPERIENCE

**QData (Astana, Kazakhstan), CTO**

August, 2025 - Present

*Computer vision platform for hazardous situation detection in school environments*

- Defined the company's technical strategy and led architecture of a real-time video analytics platform for school safety and operational monitoring.
- Leading the development of computer vision capabilities for detecting physical aggression, injuries, fire and smoke, weapons, unauthorized access, attendance events, and policy violations.
- Built and managed a cross-functional engineering team of **15+** specialists across ML, backend, frontend, DevOps, networking, and hardware.
- Directed rollout of the platform to **10** schools in Astana.
- Managed partner and client communication, translating operational needs into product and engineering priorities.

**GreenEye LLC (Astana, Kazakhstan), Head of AI/ML → CTO**

October, 2024 - July, 2025

*ML-driven platform for bullying detection and real-time alerting in schools*

- As **Head of AI/ML**, set up ML research workflows and built core computer vision systems for event and action detection, including YOLO-based pipelines, keypoint interaction models, and face recognition.
- Validated feasibility through MVPs deployed in real school environments.
- As **CTO**, led a cross-functional team of **25** specialists across ML, backend, frontend, mobile, UX/UI, and DevOps.
- Architected the platform for real-time processing, alerting, and analytics in educational institutions and built the engineering organization from scratch, owning sourcing, interviews, onboarding, and end-to-end hiring.

**INUI Gaming (Dubai, UAE), Head of AI/ML**

October, 2023 - October, 2024

*Gaming platform focused on cheat prevention in multiplayer games; total raise of \$17.8 million*

- Established the company's ML/AI function and led innovative projects for the gaming industry.
- Built anti-cheat systems for Counter-Strike 2 and CS:GO, including computer-vision and deep-learning solutions for wall-hack, aimbot, and spinbot detection.
- Led work on recommendation systems for content suggestions and the gaming marketplace.
- Built match-making and ranking systems for normal and custom team play in Counter-Strike.
- Scaled the team from **2** to **5** senior ML engineers and managed cross-team communication and stakeholder collaboration.

## EDUCATION

**PhD in Machine Learning**

August, 2024 - Present

Mohamed bin Zayed University of Artificial Intelligence (Abu Dhabi, United Arab Emirates)

*Global top-10 across ML, CV, and NLP in CSRankings; world's first AI university*

- Member of the causality research group, supervised by Prof. Kun Zhang
- Student representative of the 5th PhD in ML cohort
- Best Teaching Assistant award holder

**MPhil in Mathematical Sciences**

August, 2021 - August, 2023

University of Manchester (Manchester, United Kingdom)

*Ranked 34th globally and 6th in the UK in QS Rankings*

- Engineering and Physical Sciences Research Council (EPSRC) scholarship holder
- Teaching assistant for Calculus, Introduction to Python, and Statistical Inference

### MSc in Electrical and Computer Engineering

August, 2021 - June, 2023

Nazarbayev University (Astana, Kazakhstan)

*Top research university in Kazakhstan*

- Research assistant at ASP-LAB; worked on ML algorithms for brain-computer interfaces, resulting in 5 academic papers

### BEng in Automation and Control

August, 2015 - June, 2019

Kazakh-British Technical University (Almaty, Kazakhstan)

*ABET-accredited university*

- KBTU Success 2019 award for outstanding academic achievements holder

## PUBLICATIONS AND AWARDS

### • Selected Publications

- Stereotype Bias in a Bilingual Setting: A Culturally Grounded Evaluation in Kazakhstan, *ACL* 2026
- Subject-independent P300 speller classification using double input CNN with feature concatenation, *DSP* 2023
- Event-related spectrogram representation of EEG for CNN-based P300 speller, *APSIPA ASC* 2021
- Ensemble learning approach for subject-independent P300 speller, *EMBC* 2021
- Ensemble Voting-Based Multichannel EEG Classification in a Subject-Independent P300 Speller, *Applied Sciences* 2021
- Comparison of Generic and Subject-Specific Training for Features Classification in P300 Speller, *APSIPA ASC* 2020

### • Conference Presentations and Recognition

- **Spotlight presenter**, NeurIPS 2025 Foundation Models for the Brain and Body Workshop, presenting the winning EEG Foundation Challenge solution in San Diego, California
- **Presenter**, CRA-WP 2025 workshop in Denver, Colorado

### • Awards and Achievements

- **1st Place**, EEG Foundation Challenge at NeurIPS 2025
- **Associate Fellow of the Higher Education Academy (AFHEA)**, awarded March, 2023
- **Winner**, CodeJam to I/O for Women coding competition, February 2019

## TECHNICAL & RESEARCH STRENGTHS

- **Technical:** Machine Learning, Deep Learning, Computer Vision, signal processing, causal inference and causality, Python, PyTorch, and statistical ML frameworks.
- **Research Areas:** causal representation learning, neuroscience, EEG, brain-computer interfaces, P300 spellers, and applied computer vision systems.
- **Languages:** English (professional, IELTS 8.0), Russian (native), Kazakh (second language).