

## **Title of program**

Master of Science in Artificial Intelligence and Machine Learning (MSAIML)

MSc in AI&ML

## **Motto of program**

It is time to have a leading career with affiliation of Ala-too International University and professional title of Artificial Intelligence and Machine Learning Engineer.

## **Description of program**

The AIU Master of Science in Artificial Intelligence and Machine Learning (MSAIML) program is a specialized, quantitative course of study for highly motivated individuals seeking a professional career in the field of computer science. The AI & ML MSc degree is designed to equip young professionals with the practical knowledge, software skills, and ability to evaluate, design and build intelligent systems and apply AI and ML to various real-world problems using a broad range of tools and techniques. This program is ideal for graduates who are interested in building on their existing computer science skills to become professionals in the field of artificial intelligence and machine.

## **Academics**

The AIU MSc is a 16-month program which begins in September and confers degrees in December of the following year. The program is designed with the rigor of a traditional top tier MSc program, accelerated to match the intensity and pace of the business environment in Kyrgyzstan. Beginning with a week Orientation, you will take 8 rigorous core courses out of 10 AI and ML oriented courses that build a foundation of AI & ML. You will have a choice of 4 out of 22 electives, which will allow you the opportunity to tailor the program to pursue topic-specific professional interests and preferences. To further enhance your MSc experience, your curriculum will be augmented by the Distinguished Speaker Series and Practicum.

## **Course description**

### **Courses from The Field**

1. Artificial Intelligence and Deep Learning
2. Machine Learning & Pattern Recognition
3. Applied Machine Learning
4. Artificial Neural Networks
5. Deep Learning Foundations
6. Reinforcement Learning
7. Fuzzy Logic and Neuro-Fuzzy
8. Data warehousing and Data mining
9. Applied Programming for AI and ML
10. Cloud Computing for AI and ML

### **Elective Courses**

1. Time Series Analysis and Forecasting

2. Human Computer Interaction
3. Decision Making in Robots and Autonomous Agents
4. Robotics: Science and Systems
5. Computer Vision
6. Natural Language Processing
7. Computational Physics with Python
8. Introduction to Quantum computer
9. Linear Algebra
10. Differential Equation
11. Renewable Energy
12. Nanotechnology
13. Nano Devices
14. Nanomaterials
15. Solid State Physics
16. Discrete Mathematics for Computer Science
17. Quantum Technology
18. Big Data Technologies
19. Probability & Mathematical Statistics
20. Regression Analysis
21. Applied Devops for Developers
22. Software Architecture and Design

### **Requirements**

1. At least 2 years of cumulative work experience, the Admissions Committee reserves the right to consider exceptional applicants with less than 2 years of work experience.
2. Bachelor's and/or Master's degree diploma (or equivalent).