

Margulan Ismoldayev

margulan@mit.edu · Cambridge, MA · github.com/ismoldayev

Education

Massachusetts Institute of Technology (MIT)

Class of 2027

Candidate for Bachelor's in Computer Science & Physics. GPA 5.0/5.0

Cambridge, MA

Selected Coursework: Machine Learning* (6.7900), Deep Learning* (6.7960), Advances in Computer Vision* (6.8300), Algebra I (18.701), Design and Analysis of Algorithms (6.1220)

* - graduate level

Research Experience

MIT Quantum Photonics & AI Group

Feb 2024 – May 2024

Undergraduate Researcher

Cambridge, MA

- Engaged in quantum error correction research, focusing on LDPC decoding algorithms for MBQC platforms.
- Tasked with algorithm implementation, performance simulations, and contributing to advancements in quantum computing robustness under Prof. Dirk Englund.

Popmintchev Labs / Quantum Optics

Jul 2022 – Oct 2022

Research Assistant

UCSD, San Diego, CA

- Designed EUV – X-ray beamlines for generation of 1-100 nm coherent light, enhancing ultrafast bio and nano imaging techniques.
- Developed and implemented an advanced Frequency-Resolved Optical Gating (FROG) apparatus, significantly improving the measurement accuracy of attosecond soft X-ray pulses.

Projects & Leadership

olympiads.xyz

Jan 2022 – Present

Founder

Online

- Founded a non-profit to streamline Olympiad preparation for Bulgarian students, attracting 2100 monthly visits and hosting over 6.5 GB of free educational material.

National Astronomical Observatory and Planetarium

Sep 2021 – Jun 2023

Lecturer

Varna, Bulgaria

- Gave specialized lectures for competitive astronomy and public talks at the planetarium.
- Authored study materials that became part of the observatory's permanent educational suite.

Selected Awards

International Astronomy Olympiad

Winner (2022), Gold (2022, 2021, 2019)

International Olympiad in Astronomy and Astrophysics

Gold (2020), Silver (2022, 2021)

International Physics Olympiad

Silver (2022), Bronze (2023)