Diyora Daminova

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Education

University of Colorado Boulder Jan 2023 – Dec 2026
B.S. Aerospace Engineering Sciences, Minor in Computer Science

- Chancellor's Achievement Scholarship Recipient
- Quantum Scholars Fellowship Recipient
- Benson Undergraduate Fellowship Recipient
- Executive Board, Public Relations Chair — Society of Asian Scientists and Engineers (SASE)

Experience

National Institute of Standards and Technology (NIST) Jul 2025 – Present
Software/Systems Student Assistant

– Lead the migration and deployment of research software and web applications across servers, enabling scalable computational modeling for scientific projects.
– Optimize and maintain server infrastructure supporting scientific simulations in the CUBIT Quantum Initiative.
– Implement data integrity, versioning, and security practices to safeguard critical datasets.

ASEN 4018 Senior Design, CU Boulder Aug 2025 – Present
Lead, Command & Data Handling Subteam

– Lead the design of spacecraft command and data handling systems incorporating AI-enabled telemetry and predictive analytics for lunar greenhouse automation.
– Coordinate multidisciplinary team to integrate sensors, data pipelines, and machine learning models for environmental monitoring and plant growth optimization.
– Develop frameworks for autonomous decision-making and AI-assisted control in extreme lunar conditions.

Aerospace Mechanics Research Center (MORIS), CU Boulder May 2024 – Oct 2024
Research Assistant

– Designed GUI for multi-physics optimization software enabling simulations and automated parameter tuning.
– Collaborated with PhD researchers to integrate machine learning methods, improving computational efficiency and predictive modeling accuracy.
– Contributed to research software supporting workflows for aerospace system simulations.

Integrated Teaching and Learning Lab (ITLL), CU Boulder Aug 2023 – Present
Engineering Support Student

– Guide students on projects incorporating robotics into engineering prototypes.
– Facilitate workshops on CAD, 3D printing, and hands-on engineering projects.
– Maintain lab infrastructure and assist in research.

Technical Skills

Programming & AI: Python, C/C++, MATLAB, JavaScript, Pascal; Machine Learning, Neural Networks, Data Analysis
Tools & Platforms: TensorFlow, PyTorch, CAD Modeling, 3D Printing, GUI Development, Server Management
Areas of Expertise: AI-driven Systems, Data Handling, Computational Modeling, Prototyping, Aerospace Systems, Material Science