Asel Alibekova

Aspiring Mechanical/Aerospace Engineer | High School Senior at PRISMS I 17 years old

Email: asel.alibekova@prismsus.org I Phone: +1 (561) 207 12 98 I Location: Princeton, NJ, USA

EDUCATION

Princeton International School for Math and Science (PRISMS) **Aug 2023 - Present**
Princeton, NJ, USA

Grade 12: Modern Physics, Multivariable Calc, Differential Equations, Adv. Mandarin
Grade 11, GPA 3.95*:* AP Chemistry, Linear Algebra, Advanced Robotics, AP CS
Grade 10, GPA 3.97: AP Calculus BC, AP Physics C, Engineering, Honors Chemistry
Grade 9, GPA 4.0: Honors Pre-Calculus, Honors Biology, Honors Physics, Engineering

Cambridge Home School Online | Remote **Aug 2021 – May 2023**

iGCSE Qualification Exams (Cambridge Board, equivalent to Grade 10):

- Further Math: A, Chemistry: A, Physics: A

Cranleigh Abu Dhabi, Middle School | Abu Dhabi, UAE **Aug 2017 – Jun 2021**

- Passed iGCSE Mathematics exam (Grade 10 equivalent) at age 11, earning the highest grade

RESEARCH

Variable Camber Airfoil Research Project **Aug 2025 – Present**

Designing and developing a morphing airfoil mechanism to improve the power efficiency of radio controlled aircraft

- Presented at two research symposiums
- Won award at Mercer County Science and Engineering Fair at Princeton Uni

PROGRAMS

MIT BeaverWorks Autonomous Drone Racing **Jul 2026 – Aug 2026**

- Assembled and configured drone hardware, including Pixhawk 6C flight controller setup, sensor calibration, SiK radio telemetry links, Raspberry Pi
- Configured ground control software (QGroundControl) for flight parameter tuning and pre-flight diagnostics
- Co-developed autonomous navigation software using Python and ROS2 Jazzy, integrating PID control, optical flow, and vision-based gate detection
- Transitioned control systems from simulator testing to real-world flight hardware, debugging camera and sensor integration on physical drones

Girls Who Code **Jul 2025 – Aug 2025**

Machine Learning, participated in Industry Immersion Day

University of Minnesota Twin Cities Math Modeling **Jul 2025**

Built a mathematical model comparing methods of buckthorn removal and their effectiveness

Stanford Pre-Collegiate Summer Institute AI Course **Jun 2025 – Jul 2025**

Artificial Intelligence and Machine Learning course: developed a deep learning model for segmenting brain metastases in medical images.

MIT BeaverWorks Aircraft Design Course **Oct 2024 – Dec 2024**

Successfully completed a specialized program focused on aircraft design methodologies and basics of airplanes

EXPERIENCE

Perseuss - Engineering Intern **Aug 2026**

Designed, built, and programmed a portable obstacle detection device (IoT), including 3D-modeling the housing, integrating sensor hardware and writing detection/control software

Perseuss - Computer Science Intern **Jul 2025 – Aug 2025**

Built a custom API for a pick to light controller to convert packet protocols to user friendly commands

Teen Aviation of New Jersey member **Sept 2025 – Present**

Building an RV-12iS experimental aircraft alongside experienced aerospace industry professionals
Skills: riveting, countersinking, sheet metal basics, electrical wiring, hand and power tools, technical/assembly manual interpretation, and aeronautical standards

PRISMS - Teaching Assistant Engineering 1 **Sept 2025 – Jul 2026**

Assisted teaching freshman year engineering course with 24 students

PRISMS - Physics Lab Technician **Sept 2023 – Jun 2024**

- Calibrated and maintained laboratory equipment
- Assisted on Physical Vapor Deposition

SKILLS

- Programming Languages: Python, C++ (+ Arduino), C#, Java
- Data Science Tools: R
- Engineering tools: AutoCAD, Onshape, ROS2 Jazzy, QGroundControl, Ubuntu
- Engineering tools: Metal Lathe, Laser Cutter, 3D printers, band saw, CNC
- Cybersecurity: Fundamental understanding of security systems, networks
- Languages:

Fluent: English, Russian
Intermediate: Mandarin (B1/B2)
Basic: Arabic, Spanish, French

VOLUNTEER EXPERIENCE

Coach Assistant - Mercer County Ice Skating Rink, NJ **Sept 2024 – Present**

Assisting beginner and intermediate students in developing spins and jump techniques

SPORTS

Hamilton Aquatics YMCA Senior Swimming Team **Sept 2023 – Present**

NJ Bronze, specializing in freestyle

Former competitive ISI/ISU figure skater with 7 years of experience **Aug 2013 – May 2021**

LEADERSHIP

PRISMS Math Team President **Sept 2023 – Present**

- Organized two math competitons for middle schoolers with a total of over 200 participants from 6 states and 7 countries
- Sponsor acquisitions: HRT, Jane Street

PRISMS Engineering Club Leader **Jan 2026 – Present**

PRISMS FTC Outreach Leader **Sept 2025 – Jun 2026**