

Luka Dolgov

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STEM & Technical Experience

Robotics Club

Greenwich High School

President

Grade 11 – Present

- Collaborate with a team of 20+ students to compete in the VEX robotics competition. (2022-2023)
- Learned skills to develop 3D imaging of robots and manage robot chassis components using Autodesk Inventor, Autodesk Fusion experience.
- Utilized mechanical and electrical tooling to design and optimize the robot's performance, developing a unique Python code and design to make an autonomous robot for the VEX competition.
- Secured \$2500 from bake sales and PTA allowance through grant applications, exceeding competition expenses and requirements by 100%
- Received the 2024 Sugar Rush Over Under Competition judge award, being our school's first ever robotics trophy and award

Engineering Summer Program

Wellesley College

Accepted Student/Attendee

Grade 10

- Collaborated with a research group to develop Artificial Intelligence (AI) using MIT data sets for evaluation.
 - Developed an AI program in Python that exhibits 71% image recognition ability from 12 possible image types.
 - Optimized robotics materials design, soft chemical components, and electronic component management.
- Gained fundamental skills in origami-style mechanical engineering in the form of material usage and strength.

Self-Study

Grades 10 – 11

- Coded aerial navigation systems with matlab simulations through Upenn online course (2023), aviation physics.
- Learned computer vision techniques, math theory behind AI, optimization techniques (Summer 2023)
- Studied from Coursera - IBM Machine learning and deep learning course completion, Introduction to Engineering Mechanics (GATech course) completion (2024)

Development skills

Grades 10 – 11

- Fluent in Python, JavaScript, HTML, CSS, experience with Java, MATLAB, Cpp and Node.js framework. (2022-present)
- Developed Community-based cleanup website
 - Developed backend code for congressional app challenge website (2023-present).
 - Selected for 3rd place by Congressman Jim Himes for our district
 - Utilized MongoDB database and node.js framework
 - Collaborated with two peers on advanced javascript techniques and website hosting/database/html methods
- Self-developed AI neural-net model in python with keras libraries to simulate how people classify music as upbeat, emotional, or neutral (2023-present). Peaked at 75 percent classification success.
 - Coded with keras, tensorflow, scikit-learn

Music, Schools Club & Volunteering

Viola

Orchestral Player and Soloist

Grade 3 – Present

- Participated in CMEA Western Regionals and All-State Orchestra for CT.
 - Selected in 9th -12th grade for the Western Regional orchestra through solo-piece audition, led the viola section as first chair in the 2024 symphony orchestra.
 - Participated in the All-State Orchestra by auditioning from the group of regional players with another solo work and more rigorous repertoire. (10th chair grade 10, 6th chair grade 11)
 - Understand advanced works of orchestral work and put together complex works in a short matter of time to put on a concert over the span of a weekend.

Chess Club

Greenwich High School

Varsity Chess A-Team Member

Grade 10 – Present

- Undefeated 2023 season in the Fairfield County School League
- Helped my team to secure the state title in 2023 after winning in the state league games.
- 2nd place in school chess tournament (2023)

Additional

World Languages: English (first language), Spanish (advanced).

Just for Fun: Tennis (playing since age 10; tennis with my friends never gets old). Piano - (playing simple melodies or crunching out difficult chords for theory or to support my main instrument!). Exercise - (striving for a healthy mind and body, plus it's fun!).
