
Dmitri Kalinin

PERSONAL STATEMENT

Aspiring researcher in the physical sciences; hobbyist programmer and writer; and martial artist. I enjoy partaking in projects that involve multiple of my interests combined.

PERSONAL INFORMATION

Address: 1925 Winding Ridge Trail, Knoxville, TN, 37922

Mobile Phone Number: +1 (865)-228-3870

Date of Birth: August 22, 2005

Email: radbear77@gmail.com

EDUCATION

Webb School of Knoxville

AUGUST 2019 - MAY 2023

Current Weighted GPA (4.0 scale): 4.89

AWARDS AND SPECIAL RECOGNITION

- **FIRST Robotics Competition: Dean's List Finalist Award (Smoky Mountain Regional) (2022)**
- **John W. Green Award for Scholarship (2021, 2022)**

This award recognizes the student in each grade level with the highest GPA.

- **Rensselaer Medal (2022)**
- **Bausch and Lomb Honorary Science Award (2022)**
- **National Honor Society Membership (2022)**
- **National Merit Semifinalist (2022)**
- **AP Scholar with Distinction (2022)**

EXTRACURRICULAR ACTIVITIES

Work Experience

University of Tennessee, Knoxville's Institute for Advanced Materials and Manufacturing

Summer Research Intern

20 hours/week, 7 weeks, Grade 11

- Produced a tool that my group could use to extract the lattice constant to a precision of 0.05 Ångström from Regional High-Energy Electron Diffraction (RHEED) images of atomic layer-by-layer growth so small changes in lattice constant, which are difficult to discern from the pattern visually, could be detected.
- Learned the physics behind RHEED and layer-by-layer growth of crystals with molecular beam epitaxy.
- Made multiple presentations that I shared with my group at group meetings.

Community Service

Camp Webb's Adventure and 3D Modeling Camps

Junior Counselor

35 hours/week, 2 weeks, Grade 10

- Helped campers learn CAD with TinkerCAD, helping to guide them with the design of houses and nametags, as well as 3D printing name tags for everyone.
- Helped guide campers from place to place to make sure every summer activity went as well as possible.
- Settled disputes between campers.

Athletics

Taekwondo

Third Degree Black Belt

2 hours/week, 50 weeks/year, grades 9-12

- Practice taekwondo techniques in a variety of scenarios to improve my strength, flexibility, and fighting skills.
- Prepare for tests to advance my rank.

Clubs and Activities

Robotics: FRC Team 1466

Co-Captain, former Mechanical subteam lead

12 hours/week, 40 weeks/year, grades 9-12

- Establish deadlines, make CAD, and manage build projects.
- Train new members in CAD and fabrication techniques, as well as guide projects that involve new techniques or parts that we could experiment with so the team could potentially use these techniques or parts in the following build season.
- Represent the team in outreach events such as Sumobots in 2022 and the virtual SASA conference in 2021.

Webb Computer Science Club

Student Leader and Co-Founder

1 hour/week, about 40 weeks/year, grades 11-12

- Teach members new to programming the fundamentals of programming with Python, empowering them to make programming projects of their own.
- Get more experienced members collaborating with each other on team-based projects, such as a web extension to improve the school website.

Machine Learning and Other Miscellaneous Coding Projects

Grades 9-12

- Make projects like an image classifier, image generators, object detection, web extensions, and reinforcement learning algorithms to play games.
- All code projects are on my Github: <https://github.com/DtPeach3707> .

Webb Scholar's Bowl

Team Member

2 hours/week, about 10 weeks/year, grades 10-12

- Practiced math, physical science, and geography questions for the East TN PBS Scholar's Bowl.
- Team got top 8 every year I have been on the team so far.

Webb Science Olympiad

Team Member

2 hour/week, about 3 weeks/year, grades 9-12

- Prepared or occasionally built materials for the Tennessee Science Olympiad, such as a catapult and a circuit to detect the temperature of water using thermistors.
- Received multiple medals with teams I've been a part of throughout high school.

SUMMER PROGRAMS

- **Governor's School for the Sciences and Engineering at the University of Tennessee, Knoxville**

May 30 - June 26, 2021

A four-week, competitive admission, in-person residential pre-college program where students get to study STEM with both common morning STEM classes and afternoon classes of the student's choosing, with laboratory and research experiences to accompany it. I took physics as my afternoon class.

- **Programs for Talented Youth: Creative Writing**

July 12 - July 23, 2021

A two-week virtual program hosted by Vanderbilt University that focuses one week on poetry and the other week on short stories. Each week culminates in a writing workshop to ultimately improve the talents of every student participating.

- **Quantum Cryptography School for Young Students (University of Waterloo)**

August 3 - August 13, 2021

A two-week online (for 2021) program hosted by the University of Waterloo where students learn the fundamentals of quantum computing and are able to make experiments with the diffraction of light to find the length of a hair and planck length.

EXAMINATIONS

- **American Mathematics Competition 10:** 73.5 (2020), 106.5 (February 2021)
- **American Mathematics Competition 12:** 103.5 (November 2021)
- **American Invitational Mathematics Exam:** 1 (2021), 3 (2022)
- **F=ma Exam:** 14 (2022)
- **National Spanish Exam:** Premio de Plata (Level 2, Outside Experience, 2020), Mencion Honorifica (Level 3, Classroom Experience, 2021)

PERSONAL INTERESTS

STEM, Creative Writing, Martial Arts, and Freerunning