

# Hovik Grigoryan

Ithaca, NY, 14853  
Cell: (607) 262-5268  
hg483@cornell.edu

## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY  
Mechanical Engineering Major

Expected May 2027

## PROJECTS

**Robot**, Geneva, Switzerland, *FIRST Global Challenge Team Armenia*

August 2022 – October 2022

- Contributed to Team Armenia in an international robotics competition
- Designed and constructed the driving system of the robot, served as the primary driver of the robot
- Developed control systems using **Arduino** technology to enhance robot performance

**N<sub>2</sub> Pulse Laser**, Cornell University, Ithaca, NY

August 2023 – December 2023

- Designed and built an **N<sub>2</sub> pulse laser** utilizing a **Thyatron** and a **555-timer** as part of the Lasers and Photonics course
- Developed a pulse generator, ensuring precise timing functionality
- Selected and integrated components including diodes, transformers, and resistors to optimize laser performance

## Undergraduate Research Experience

**SIOS Lab (Prof. Dmitry Savransky)**, Cornell University, Department of Aerospace Engineering    **May 2025 - present**

- Contributing to the **Nancy Grace Roman Space Telescope** project, funded by NASA
- Designed and implemented a **C++ and Python algorithm** to efficiently estimate delta magnitude (dMag) values for space objects given varying integration times, using advanced mathematical modeling
- Integrated work with **Git/GitHub** for version control and collaborative development in a small research team
- Algorithm enables future mission data analysis and observation planning; code will support operations after telescope launch in 2027

**Katz Lab (Prof. Or Katz)**, Cornell University, Department of Applied Engineering Physics    **February 2025 – May 2025**

- Supported development of a **cutting-edge quantum computing system** by identifying high-precision accelerometers for the assembly platform
- Researched and compared **accelerometer solutions** from manufacturers including Brüel & Kjær, Kistler, Wilcoxon, and Omega Engineering
- Collected and analyzed performance specifications across wide frequency range, balancing sensitivity, bandwidth, and cost-effectiveness.
- Coordinated with engineers from multiple vendors and recommended accelerometers for the lab's Operational and budgetary requirements

## LEADERSHIP EXPERIENCE

**Official Ambassador of Samsung Innovation Campus**, Dilijan, Armenia, *Samsung Electronics*

- Helped with the organization of an educational program, sponsored by Samsung
- Delivered speeches and led opening and closing ceremonies for the project
- Organized tours for high-ranked guests, showcasing school facilities and programs

October 2021 – May 2023

**Organization of a Math Summer Camp**, Yerevan, Armenia, *PhysMath School*

May 2022 – August 2022

- Led the organization of a math summer camp, including curriculum development and educational program design
- Crafted engaging and effective lesson plans to enhance student learning
- Participated in the selection process for the camp, to ensure diverse and motivated group
- Taught combinatorics, statistics, number theory and other math topics to over 100 students

**Leader of Math tutoring club**, Dilijan, Armenia, *UWC Dilijan*

November 2021 – May 2023

- Established and organized a math tutoring club to support students in calculus and geometry
- Developed a comprehensive selection process for tutors to ensure high-quality instruction
- Matched tutors with tutees to facilitate effective learning experiences
- Lead both individual and group math tutoring sessions, fostering a collaborative learning environment

## **WORK EXPERIENCE**

**Web Archiving**, Ithaca, NY, *Cornell University, Olin Library*

November 2023 – Present

- Conducted archiving of university websites to preserve digital content
- Performed quality assurance on archived materials, providing feedback to enhance the archiving process

## **SPECIALIZED SKILLS**

**Programming / Computers:** Autodesk Fusion 360, MATLAB, Python, C++, HTML, CSS, Excel

**Languages:** English (fluent), Armenian(fluent), Russian(fluent), German(intermediate), French(conversational)