

# Derek Mulholland

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## EDUCATION

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### Vanderbilt University, School of Engineering

Bachelor of Engineering

Expected Spring 2023

Major: Mechanical Engineering, Minors: Computer Science, Mathematics

GPA: 3.452; Planned Credit Hours Completed (As of Summer 2022): 112

Relevant Coursework: Mechatronics, Applied Machine Learning, Machine Analysis & Design, Computational Fluid Dynamics, System Dynamics, Intermediate Software Design, Circuits I, Thermodynamics, Instrumentation, Linear Algebra, Differential Equations.

### Manhasset Public High School

Regents with Advanced Designation and Honors

Spring 2019

Cumulative Weighted GPA: 4.312/4.00; ACT: 35;

## WORK EXPERIENCE

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### Vanderbilt University Wond'ry

Nashville, TN

Maker Mentor.

February 2021-Present

- Trained in various fabrication and prototyping methods, including laser cutting and 3D printing, and with machining tools for engineering design projects.
- Assisted students in design and synthesis of ideas in the makerspace and examined technical drawings and sketches to move from design to physical product.

### New York State Parks

Long Island, NY

Summer Ocean Lifeguard for the Jones Beach Lifeguard Corp.

Summer 2020-Present

- Developed skills as a first line medical caregiver while practicing and employing life-saving rescue procedures.
- Gained experience diffusing tense situations between patrons and mitigating conflict amid COVID-19 policy.

### New York Institute of Technology School of Engineering

Old Brookville, NY

Research Assistant

Summer 2018

- Worked in the School of Engineering laboratory developing CAD models for automatic regenerative suspension systems in Solidworks while researching mechanical motion rectifiers and various means of energy transmission.
- Gained hands on experience using CAD software and fostered development for a graduate level research project.

## LEADERSHIP/VOLUNTEER EXPERIENCE

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### American Society of Mechanical Engineers Vanderbilt

Nashville, TN

Chapter Vice President

Fall 2021 - Present

- Active participant in campus mechanical engineering related activities, such as running speaker series and engineering community activities.
- Expanding involvement in future nationwide mechanical competitions and collaborative work.

### Plandome Fire Department

Plandome, NY

Volunteer Firefighter Probationer

Summer 2020 - Present

- Started in Juniors program gaining experience in non-fire scenarios, practicing hose usage, search and rescue techniques, evacuation, air tanks and full equipment practice, served as Junior Captain
- Participated in community building activities such as annual Christmas Tree sale, Memorial Day Parade, Fourth of July, Easter Egg Hunt.

### Quantadores Quantitative Trading Club

Nashville, TN

Nashville, TN

Founding Member

Fall 2020 - Present

- Student organization at Vanderbilt University equipping students with knowledge on how to begin quantitative algorithmic trading.
- Introduction to the stock market, trading techniques, various types of trades, algorithm development, back testing, API usage, relevant statistical analysis as well as implementation of coding algorithms.

### V-Squared Engineering Student Mentorship

Nashville, TN

Mentor

Fall 2020 - Present

- Mentored a group of first year engineering students, giving advice and guidance regarding classes, and campus life around Vanderbilt in the scope of engineering, and how individuals can best use their campus resources.

## ADDITIONAL INFORMATION

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**Computer Skills:** Proficient in Microsoft Office Suite: (Word, PowerPoint, Excel), IBM SPSS Statistical Analysis

**CAD Software Experience:** Solidworks, CREO Parametric, CREO Drawing, AutoDesk Fusion 360, AutoCAD LT, Linkages, Dynacam

**Modeling/Prototyping Skills:** Foam Core Modeling, Laser Cutting, 3D printing. Arduino/Raspberry Pi, Molding & Casting, Vacuum Forming

**Academic Honors:** Vanderbilt Deans List, AP Scholar with Honors, National Merit Semifinalist

**Technical Languages:** Java, C++, Python, LabVIEW, MATLAB

**Activities:** Vanderbilt Club Men's Lacrosse Team

**Interests:** Weight Lifting, Surfing, Choral Music, GoPuff Brand Ambassador, Costco Enthusiast.