

# Nicole Schmidt

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## Education

### **Massachusetts Institute of Technology**

**Undergraduate Class of 2026 | GPA: 4.6/5.0**

- Candidate for Course 3-A(Materials Science and Engineering) with a focus in Mechanical Engineering
- Relevant Coursework:
  - Fall 2023: Structure of Materials, Mechanics of Materials, Mechanics and Materials I
  - Spring 2023: Differential Equations, Electricity and Magnetism, Introduction to Python, Introduction to Computational Thinking and Data Science, and Math for Computer Science
  - Fall 2022: Multivariable Calculus, Classical Mechanics, and Solid State Chemistry
- [Momentum 2023](#) Speed Challenge sponsored by NASA Goddard Space Flight Center

### **International Academy Okma Campus**

**Class of 2022 | GPA: 4.0/4.0**

- Relevant Clubs and Extracurriculars: Science Olympiad, Physics Help Club, Math Club, Chemistry Club, Programming Club, Math Lab, Web Technology Enrichment, Robotics, Cubes in Space, and Girls Who Code

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## Leadership Experience

### **Simmons House Government: FROSH Chair**

January 2023 - present

- Organize Campus Preview Weekend and Resident Exploration events at Simmons hall for the incoming class

### **MIT Society of Women Engineers (SWE): Freshman Representative for Web Chair**

October 2022 - May 2023

- Updated and maintained MIT SWE website: <http://swe.mit.edu/>

### **Science Olympiad: President**

August 2021 - May 2022

- Assigned events to participants, coordinated team participation in competitions, facilitated group study periods
- Competed in the Astronomy, Protein Modeling, Detector Building, Remote Sensing, and/or Experimental Design

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## Work Experience

### **MIT Undergraduate Researcher in the Tasan Group**

10 hours/week September 2023 - present

- Characterizing the oxidation response and mechanical responses of advanced metal alloys at high temperatures

### **Shell Techworks Systems Engineering Intern**

40 hours/week June 2023 - August 2023

- Assisted in the development of an immersive liquid cooling system for network servers
- Utilized CAD to design a badge-holder that could detect if someone left their desk without their badge

### **MIT Undergraduate Researcher in the Barrett Group**

10 hours/week February 2023 - May 2023

- Assisted in the development of the power system for an electro-aerodynamic (EAD) aircraft

### **NASA STEM Enhancement in Earth Science (SEES) Intern**

20 hours/week May 2021 - August 2021

- Analyzed NASA satellite data to document developments and changes in the ecosystems of the United States in the context of the spread of mosquito-borne diseases
- Conceptualized the application of waveguide-based biosensors for the detection and management of flaviviridae alongside 7 fellow interns, which was presented by associate in the AGU Fall Meeting of 2021 ([Link to paper](#))

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## Projects and Extracurriculars

### **MIT Motorsports: Electrical and Software Member and Testing Lead**

- Organizing, documenting, and facilitating all testing performed on our vehicles
- Programming and assembling STMs for dashboard on hybrid FSAE vehicle
- Reprogrammed CSB (Charger Shutdown Board) to communicate via CAN messages as opposed to serial data

**Personal Project:** Designed, constructed, programmed, and tested an automated aeroponics system from scratch

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## Skills

**Technical Skills:** Polishing, Soldering, Band Saw, Electric Saw, Multimeter, LV Battery Testing, Basic mechanical tools

**Software Skills:** Basic Solidworks, Basic MATLAB, Web Development, Spreadsheets, Data Analysis, Python