

# Mahika Maini

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## Objective

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Conscientious and ambitious Computer Engineering major specializing in Robotics and Distributed Systems & Software Design. Interested in opportunities involving robotics, software-hardware interaction, and AI/ML to apply technical and data analytic skills. Seeking an internship/co-op in the above-mentioned fields starting **May 2025**.

## Education

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**Georgia Institute of Technology | Atlanta, GA**

*August 2024 – May 2028 (Expected)*

Bachelor of Science in Computer Engineering, GPA 4.00

**Relevant Coursework:** Fundamentals of Digital System Design, Linear Algebra, Introduction to Object-Oriented Programming

## Skills

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**Programming Languages:** Java, Python, HTML/CSS

**Frameworks:** IntelliJ, VSCode, GitHub, Arduino, Repl.it

**Soft Skills:** Technical reports, documentation, Microsoft Applications, presentations (large and small audiences)

**Professional Organizations:** Women in ECE, Society of Women Engineers

**Languages:** English, French (conversational), Hindi (elementary)

## Experience

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**GT Marine Robotics Group | Atlanta, GA**

*January 2025 - Present*

**Electrical & Software Engineer**

- Working in a team to design and build a mini robot submarine that navigates maritime obstacles autonomously.
- Getting trained in technical skills such as SolidWorks CAD, laser cutting, and PCB design.

**Fremont High Robotics | Sunnyvale, CA**

*September 2020 – May 2024*

**Software & Electrical Engineer (FTC 16533 and FRC 3501); Data Analyst; Outreach Event Volunteer**

*FIRST Robotics chapter focused on fostering a passion for science, technology, engineering, art, and math (STEAM) in the community.*

- Programmed teleoperation controls in Blockly to ensure practicality and flexibility for team drivers.
- Coded autonomous scoring controls in Java, including hardwiring the electrical system and components.
- Formulated STEAM lesson on earth science for community outreach campaign; demonstrated 9 such activities to 150 students at 3 local elementary schools in a historically underprivileged school district.
- Created and maintained a plan to collect data on community outreach impact; documented metrics for award applications.

## Projects

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**Predicting the Remaining Useful Lifespan of IGBTs Using Physics-Informed Machine Learning**

**University of California, Santa Barbara**

*July 2023*

*Team-made machine learning model based on Negative Bias Temperature Instability (NBTI) calculations to predict the remaining lifespan of Insulated Gate Bipolar Transistors (IGBTs).*

- Developed mean squared error-based loss function with Python to heavily penalize overpredictions; final model had an average prediction accuracy of 92%.
- Drafted abstract and methodology sections of research paper; formulated relevant tables and figures.
- Addressed an audience of 200 at final Capstone Seminar, enlisting depth of explanation to ensure understanding of technical details.

## Leadership & Volunteering

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**The Y (YMCA) | Project Cornerstone Student Board Member**

*August 2022 – June 2024*

- Presented methods to YMCA board members on how adults can better support teens with external pressures.
- Crafted newsletter informing parents of the developmental and social effects of technology use on young children.

**Sunnyvale Martial Arts Academy | Teaching Assistant**

*January – December 2021*

- Shadowed classes of 30 students; assisted the master instructor with teaching techniques and form.
- Led technical drills with individuals and small groups; adapted methods of instruction and feedback for different age groups.

**Additional Interests**

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**Hobbies:** Taekwondo, Creative Writing, Reading, Swimming