

# Emily Bigio

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## EDUCATION

**New York Institute of Technology, New York, NY**

*Master of Science, Electrical & Computer Engineering.*

*Bachelor of Science, Electrical & Computer Engineering; Minor, Mathematics & Physics.*

**GPA:** 3.7/4.0

**Awards:** BS Electrical and Computer Engineering Dean's Award, Presidential/Dean's Honor List

**Expected May 2026**

**May 2025**

## SKILLS

**General:** Data Analysis, Problem Solving, Critical Thinking, Communication, Collaboration

**Programming Languages:** Java, MATLAB

**Operating Systems:** Windows 8.1/10, MacOS X, Ubuntu Linux

**Software:** Microsoft Office, LTSpice, PSpice, Multisim, PSoC Creator, Eclipse IDE, IntelliJ, Keil 805, MATLAB

## RESEARCH EXPERIENCE

**Undergraduate Research Assistant, New York Tech**

**May 2024-Present**

- Conduct research on the application of multispectral imaging for plant phenotyping and disease detection
- Contribute to literature reviews, summarizing state of the art research, and exploring potential solutions for the integration of water stress detection with automated irrigation systems
- Visited 35 NYC community gardens to understand challenges faced in urban agriculture and brainstorm potential technological solutions to improve sustainability and plant health

**Undergraduate Research Assistant, New York Tech**

**September 2024-Present**

- Lead a team of 5 to design a portable imaging device using near infrared to detect plant stress and automate irrigation
- Conduct literature reviews and hardware analysis to optimize low-cost system components for water management
- Collaborate in a multidisciplinary team to integrate software and hardware solutions for efficient irrigation control

## PROJECTS

**Patient Database System, New York Tech**

**Spring 2024**

- Designed a Java-based patient database system with functionality to add, remove, and update patient records while ensuring unique patient ID generation
- Implemented tracking for overdue patient visits, flagging records for follow-up and optimizing patient management
- Created a file management system to securely store and retrieve patient information, ensuring efficient data handling

**Active Noise Cancellation Filter, New York Tech**

**Fall 2023**

- Developed an active noise cancellation system in MATLAB, utilizing signal processing techniques to reduce unwanted noise
- Generated audio signals with added unwanted noise and successfully filtered it out using the system's noise cancellation algorithms
- Optimized the filtering process to ensure clear sound output, demonstrating effective noise reduction across various noise levels and conditions

**BMI Calculator, New York Tech**

**Fall 2022**

- Created GUI program using Java that collects users' height and weight to convert to BMI
- Designed multiple catches to prevent misuse of program
- Included unit conversion and tips for users on how to solve weight problems

## EXTRACURRICULAR ACTIVITIES

**Media Coordinator, Institute of Electrical and Electronics Engineers (IEEE), New York Tech**

**August 2023-Present**

- Develop and implement social media strategies to increase engagement and visibility for IEEE's events and initiatives
- Manage content creation and scheduling across multiple platforms to boost followers and interaction
- Collaborate with event organizers and club members to promote activities, workshops, and conferences through targeted campaigns

## OTHER WORK EXPERIENCE

**Baker & Customer Service Representative, Marie Blachere Boulangerie, Great Neck, NY**

**February 2019-Present**