

# Morgan Summerlin

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## EDUCATION

**Georgia Institute of Technology**, Atlanta, GA August 2023 – May 2027  
Bachelor of Science (B.Sc) in Biomedical Engineering, Minor in Computing & Intelligence GPA: 3.86/4.0

## EXPERIENCE

### Director of Programming

*Executive Board, Residence Hall Association* November 2024 – May 2025

- Managed RHA's budget of around \$30K to plan events that promote wellness for 10,000 residents.
- Collaborated with an executive team of five people to plan these events as well as other campus organizations, ensuring residents have the best on-campus living experience possible.

### Research Assistant Intern

*Mechanobiology REU, Virginia Commonwealth University* June 2024 – August 2024

- Investigated how fatty liver disease affects bone strength and assessed estrogen as a preventative measure.
- Aided in Micro CT mice scans and mechanical testing on muscle and bone.
- Conducted statistical analysis on CT scan data utilizing 2-way ANOVA tests.
- Assessed gene correlation to bone strength using RNA extraction, cDNA creation, and qPCR.

### Lab Assistant

*Chemistry Stockroom, Georgia Institute of Technology* August 2023 – May 2024

- Stocked and organized chemicals, made solutions and prepped for lab each week, and kept lab rooms cleaned and prepared.

### Barista/Food Service

*Local Coffee of East Ridge, East Ridge, TN* June 2023 – August 2023

- Duties included barista work, food preparation, cashier work, serving items, and cleaning the store.

## RESEARCH

### Undergraduate Research Assistant

*Chan Lab in Nanomaterials & Drug Delivery, Georgia Institute of Technology* August 2024 – Present

- Created volatile-barcoded protease probes for breath-based diagnosis of respiratory diseases.
- Engaged in animal work, volatile cleavage assays, BCA protein assays, Mass Spectrometry work, buffer preparation, thermal desorption, Python coding, and bacterial liquid culture.

### Research Assistant

*Chemistry Research Lab, Tennessee Technological University* June 2022

- Worked on a treatment for cancer by creating square planar molecules that could potentially halt cancerous cell proliferation.
- Conducted NMR Spectroscopy to check that every chemical created was what it was intended to be.

## EXTRACURRICULARS & LEADERSHIP

### Financial Coordinator

*Hall Council, Residence Hall Association* August 2024 – December 2024

- Managed the Council's budget and advised the community on appropriate spending, communicating status at weekly meeting.
- Elected to the Financial Oversight and Programming Committees to help oversee budget and programming for RHA.

### Biomedical Engineering Society

*Georgia Institute of Technology* August 2024 – Present

- Learned about opportunities in biomedical engineering and connected to the national chapter of BMES.

### Bioinformatics Club

*Georgia Institute of Technology* January 2024 – Present

- Learned about opportunities in research and industry relating to computational biology and bioinformatics.

## CONFERENCES & PRESENTATIONS

**Biomedical Engineering Society National Conference**, Baltimore, MD October 2024

Linking Liver and Bone: Skeletal Fragility and Metabolic Dysfunction-Associated Steatotic Liver Disease  
*Morgan Summerlin, Galen Goldscheitter, Evan Buettmann, and Henry Donahue*

## AWARDS

**WIE George Family Foundation Scholarship 2024** 2024 – 2025

**Chattanooga Georgia Tech Alumni Scholarship 2023** 2023 – 2027

**Chattanooga Coca-Cola Centennial Scholarship 2023** 2023 – 2027

**Zell Miller Scholar** 2023 – Present

## SKILLS

**Programming:** Java, MATLAB, Python

**Data Analysis:** Data Viewer, CTAn, GraphPad Prism, Microsoft Excel

**Wet Lab:** NMR Spectroscopy, Micro CT, Muscle & Bone Mechanical Testing, Animal Work, RNA Extraction, cDNA

Creation, qPCR, Volatile Cleavage Assays, BCA Protein Assays, Mass Spectrometry, Buffer Preparation, Thermal Desorption, Bacterial Liquid Culture