LAUREN SABO

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Hardworking, Computer Science student aiming to contribute skills in big-data, multiprocessing, software development, and application-based problem solving to the software industry as an intern.

Education

Georgia Institute of Technology, Atlanta, GA   May 2025 (expected)
Major: Computer Science, Concentrations: Intelligence & People
- *Minor:* Health & Medical Sciences
- Dean's List at Georgia Tech

Research

McGrath & Streelman Lab, *Bioinformatics Researcher*   May 2022 — Present
A population genomics lab with a focus on Lake Malawi Cichlids
- Programmed a multiprocessing script within Python for the Genome Analysis Tool Kit (GATK) to process big data, such as multiple FASTA and VCF files at once.
- Spearheaded the processing and analysis of large-scale genomic datasets for Lake Malawi cichlids, utilizing advanced bioinformatics tools and programming languages such as Python.
- Collaborated with graduate students to share resources, data, and methodologies, fostering a cooperative research environment, and contributing to the broader scientific community's understanding of cichlid evolution.
- Writing an undergraduate thesis on the genomic assembly and annotation of Lake Malawi cichlids, contributing to the generation of high-quality reference genomes to enhance understanding of population structure and evolutionary dynamics.

Projects

"Expanding the Lake Malawi cichlid genome using high quality long-read sequencing", *Head Researcher*   Jan. 2024 — Present
- Executing rigorous bioinformatics analyses to assemble and annotate complex genomic sequences, enhancing the genomic resources available for studying cichlid speciation and diversification.
- Enhancing the existing *M. zebra* reference genome (UMD2a) and developing the reference genomes of *M. conophoros*, *C. virginalis*, *A. chitande,* and *L. fuelleborni*.

Chattahoochee River Conditions App – iOS Development, *Full Stack Software Engineer*   Jan. 2024 — Present
- Developing in React Native and JavaScript, the app is intended to provide real-time river conditions for the GT Rowing Club.
- Is connected to the USGS Watershed Services database for updates and tells the user when the conditions are unsafe/ safe.

"An Alternative Microinjection Manipulator and Pipette Pulling   Sept. 2020 — Apr. 2021
Technique as a Tool for the Delivery of CRISPR-Cas9", *Head Researcher*
- Designed a cost-effective approach to pulling Microinjection needles and 3D-printed a micromanipulator.
- Apparatus and needles can be used for in-vivo injections into the gonad of the nematode C. elegans.

Work Experience & Leadership

GT Rowing Club, *Rower, Coxswain, & Board Member*   Feb. 2022 — Present
   Head Coxswain (2024): Leader of coxswain education and manager of coxswain equipment.
   Merchandise Officer (2023): Developed a team brand and coordinated merchandise inventory with distributors.
- Medaled at the Head of the Hooch Regatta (Chattanooga, TN), Southern Intercollegiate Rowing (SIRA) (Knoxville, TN), Head of the South Regatta (Augusta, GA), Secret City Head Race (Knoxville, TN).
- Rowed in A-Finals at the Jefferson Dad Vail Regatta (Philadelphia, PA), twice.
- Requalified for the Head of the Charles 2022 (Boston, MA) as a coxswain in the Women's Collegiate 4+ event, placing 13th/ 35.
- Commits 25+ hours weekly to conducting and overseeing rowers, practice, and team building tactical assistance during races.

Gold & Bold Coffee Roasters, *Barista*   Nov. 2022 — Present
- Skilled in customer service and food prep in a high-speed environment.

Skills & Interests

Computing Languages & Software:
   Java, Python, JavaScript, React Native*,* C, R, Assembly Code, HTML, CSS, Docker, Swift

Bioinformatics:
   Dry-Lab: Genome Sequencing Software (HiFi.asm, LJA, Flye), BioNano UI, Server Organization Strategies, Binary Alignment Map (BAM) Files, Variant Call Format (VCF) Files, Genome Analysis Tool Kit (GATK)
   Biotechnology: DNA Isolation, Qubit Quantification, Nanodrop Quantification, Gel Electrophoresis, SDS-PAGE Gel Electrophoresis, Restriction Digest/PCR, ELISA, Care of BSL1-Level Bacteria, Stain Protocols, Care of C. elegans

Concepts: Object-Oriented Programming (OOP), Genomic Assembly, Computational Biology, Multiprocessing, Biotechnology, Front-End Software Development, Computer Architecture, Data Structures, Linear Algebra, Differential Equations

Affiliations: GT Rowing Club, Women @ the College of Computing, Little Einsteins Outreach Club

Hobbies: Hiking, Traveling, Drawing, Reading, Painting, and Architecture