

LAUREN SABO

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Education

M.S. Bioinformatics , Georgia Institute of Technology, Atlanta, GA	Jan. 2025 — May 2026 (expected)
B.S. Computer Science , Georgia Institute of Technology, Atlanta, GA	Aug. 2021 — Dec. 2025 (expected)
- Concentrations: Media & People Major GPA: 3.9	
- Minor: Health & Medical Sciences	

Skills & Concepts

Computing Languages & Software	Bioinformatics
Python, Java, React/ Node.js, Bash/ Shell, Git, HTML/ CSS, R, C++, C, Docker, Assembly Code, Swift	<i>Software:</i> BRAKER3, NCBI BLAST, Genome Sequencing Software (HiFi.asm, Flye, LJA), R/qtL2, Genome Analysis Tool Kit (GATK), SAMtools, Bionano Solve
Data Visualization & Manipulation	<i>Wet Lab:</i> Qubit Quantification, Nanodrop Quantification, DNA Isolation, Restriction Digest/PCR
D3, Tableau, plotly	

Work Experience

Graduate Research Assistant, McGrath Lab	Jan. 2026 — Present
Co-founder & Chief of Product Design, Quuri Co.	May 2024 — Present
- Led the end-to-end product design process for a research networking platform, transforming user discovery data into an intuitive interface that improved engagement and information accessibility.	
- Engineered full-stack functionality with Firebase to deliver dynamic, real-time updates and ensure scalable performance for growing academic communities.	
Undergraduate Research Assistant, McGrath Lab	May 2022 — Dec. 2025
- Accelerated genome assembly and scaffolding workflows for African cichlid species by developing optimized Python pipelines tailored for long-read sequencing data (PacBio HiFi).	
- Improved genomic data accuracy and assembly depth through rigorous quality control, read filtering, and alignment, strengthening downstream comparative and evolutionary analyses.	

Projects

"Development of a Low-Coverage QTL Mapping Pipeline to Identify a Male Sex Determiner in Aulonocara sp. "Yellow Head"	Aug. 2025 — Present
- Engineered a robust QTL mapping pipeline for ultra-low coverage (~0.1X) sequencing data, enabling reliable detection of sex-linked loci in Aulonocara sp. "Yellow Head."	
- Applied probabilistic genotype inference with Hidden Markov Models to accurately impute offspring haplotypes, pinpointing candidate regions on LG10 that underlie male determination	
"Comprehensive Structural and Functional Genome Annotation of Lake Malawi Cichlids Using BRAKER3: Insights into Evolutionary Adaptation and Speciation."	Jan. 2025 — May 2025
- In accordance with the President's Undergraduate Research Award (2025)	
- Advanced comparative genomics of five African cichlid species by integrating PacBio HiFi assemblies and RNA-Seq data in a BRAKER3 -based annotation framework to detect lineage-specific adaptive genes.	
- Designed a BLASTp -centered annotation pipeline improving annotation completeness and accelerating downstream evolutionary analyses.	
"Expanding the Lake Malawi cichlid genome using high quality long-read sequencing"	Jan. 2024 — Dec. 2024
- Strengthened the <i>Metriaclima zebra</i> reference genome (UMD2a) by a custom long-read assembly pipeline, improving contiguity and coverage to support comparative genomic research across cichlid species.	
Chattahoochee River Conditions App	Jan. 2024 — Feb. 2024
- Built a real-time web application integrating USGS Water Quality API data to visualize river conditions, improving safety awareness and operational planning for the Georgia Tech Rowing Club.	

Leadership

Coxswain, Rower, & Board Member, Georgia Tech Rowing	Feb. 2022 — May 2025
- ACRA National Champion (2025) – Men's Lightweight 4+ (<i>Coxswain</i>)	