Melissa Womack

512-568-5185 | melissa.j.womack@gmail.com | Austin, Texas | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Software Engineer with expertise in Python, SQL, and front-end web development, leveraging a background in bioinformatics to deliver scalable, data-driven solutions. Experienced in optimizing systems that manage large volumes of data, improving workflows, and collaborating with cross-functional teams to deliver user-focused results.

TECHNICAL SKILLS

Languages & Frameworks: Python, JavaScript, HTML, CSS, Node.js
Cloud & Infrastructure: AWS (Lambda, S3, DynamoDB), CI/CD pipelines (GitLab)
Database Management: SQL (MySQL, PostgreSQL), Non-relational Databases
Tools & Technologies: Git, REST APIs, JSON, AJAX, Bootstrap, Materialize, Jest, Unit Testing, Infrastructure as Code

PROFESSIONAL EXPERIENCE

Research Technician   **March 2024 - Present**
Natera - Austin, Texas
- Developed a machine learning-based SQL dashboard to predict freezer occupancy and enhance sample management efficiency.
- Maintained Python scripts for data processing and automated uploads to internal databases.
- Trained technicians on data workflows and sample reconciliation in compliance with GxP standards.

Research & Development Scientist II   **November 2021 – June 2023**
Thermo Fisher Scientific - San Diego, California
- Designed and executed experiments for rapid point-of-care PCR diagnostic assays.
- Analyzed NGS data to optimize workflows and troubleshoot primer interactions.

EDUCATION

MS, Bioinformatics and Computational Biology, University of Texas at Dallas   Richardson, Texas, **May 2021**
Full Stack Web Development Certification, University of Texas   Austin, Texas, **October 2018**
BS, Microbiology, Minor in Biochemistry, Texas State University   San Marcos, Texas, **May 2018**

PROJECTS

Freezer Occupancy Dashboard - Internal Tool at Natera
- **Technologies:** Python, SQL
- Leveraged machine learning models to predict freezer occupancy, improving lab inventory planning.

ClassUp - Online platform for class creation and sharing
- **Technologies:** React, Node.js, MySQL, Stripe API
- Led backend development and integration with third-party APIs for payment processing.

Career Path Finder - Career and educational resource finder
- **Technologies:** JavaScript, Bootstrap, JSON, APIs
- Designed intuitive front-end user interfaces to simplify complex queries.