

David Brittain III

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EDUCATION

UNIVERSITY OF ST. THOMAS

BS IN CELL & MOLECULAR BIOLOGY
Houston, TX
2018-2021
Graduated *Summa Cum Laude*

CENTRAL MICHIGAN UNIVERSITY

MAJOR: BIOMEDICAL SCIENCES
Mt. Pleasant, MI
2016-2018
(*Transferred*)

COURSEWORK

COMPUTER SCIENCE

Object Oriented Programming
Data Structures
Special Topics in CS - Seminar

BIOLOGY

Biostatistics

HARD SKILLS

PROGRAMMING

Experienced:
Python • JavaScript • HTML/CSS
Familiar:
R • Java • TypeScript • SCSS

FRAMEWORKS

React • Express • Node.js • Apollo
GraphQL

OTHER COMPETENCIES

Pandas • Docker • PostgreSQL • AWS
• Google Cloud • Git/GitHub •
Sequelize • Selenium

OPERATING SYSTEMS

Windows • Linux (Ubuntu) • MacOS

LINKS

Personal website: tbrittain.com
Github: [/tbrittain](https://github.com/tbrittain)
HackerRank: [/treybrittain](https://www.hackerrank.com/treybrittain)
LinkedIn: [/tbritt](https://www.linkedin.com/in/tbritt)

RESEARCH EXPERIENCE

LARIOS-ROSELL LAB | UNDERGRADUATE RESEARCH ASSISTANT

August 2018 - May 2021 | University of St. Thomas - Houston, TX

- Worked as a part of a team investigating viral ecology contained in mosquitoes from the Houston area
- Established a bioinformatics workflow to analyze metagenomic sequence data, speeding up the identification of viral sequences significantly
- *Computational skills used: R for data analysis, Bash scripts, Excel*

HADSELL LAB | SMART PROGRAM INTERN

June - August 2019 | Baylor College of Medicine - Houston, TX

- Investigated the effect of the gut microbiome as a mediator between antibiotic use during pregnancy and milk production and nutrition post-pregnancy
- Found that antibiotic use significantly reduces milkfat concentration, potentially leading to lower nutritional value overall
- *Computational skills used: R for data analysis, Python (with the bioinformatics workflow QIIME)*

PERSONAL PROGRAMMING PROJECTS

VAULTBOT

Discord bot that integrates with Spotify to moderate two specific playlists

- Bot written in Python using Discord.py and Spotipy packages
- Express-GraphQL API server used in combination with a React frontend to present song data interactively ([viewable here](#))
- Fully containerized using Docker
- Hosted on Google Cloud using Cloud SQL, Compute Engine for the bot, and Cloud Run for the GraphQL server and React server (using Nginx to host the production build of React)

OVERWATCH LEAGUE (OWL) API

API for querying data from the Overwatch League eSports results

- REST API backend written using Express supporting 18 endpoints for querying player performance, match history, and more
- GraphQL API backend written using Express-GraphQL wrapping the REST API
- Python container used for updating the PostgreSQL database with new match and player information, developed using TDD
- Fully containerized using Docker and documented using Postman

HONORS/AWARDS

- 2021 3rd place in HP-AWS Hackathon
Designed a chatbot using AWS Lex, DynamoDB, and Lambda functions
- 2018 Recipient of Monaghan Achievement Scholarship (4 year scholarship)

ORGANIZATIONS

- National Beta Beta Beta Biological Honor Society
National Alpha Sigma Lambda Honor Society
National American Society for Biochemistry and Molecular Biology
Local UST Celt Compute Club