**EDUCATION**

MS | Computer Science

Johns Hopkins | 2023

* Bioinformatics

BS | Biological Sciences

Towson University | 2019

* Cellular/Molecular Biology
* Minor: Bioinformatics

**SKILLS**

**Languages**

* Python
* R
* Bash
* Java
* HTML/CSS
* JavaScript/ReactJS
* SQL

**Operating Systems**

* Unix/Linux
* MacOS
* Windows

**Software**

* Github/Git
* Conda
* Docker
* EPIC
* ScriptPath
* Jupyter Notebook

**Sequencing Data**

* Nanopore
* Illumina

**Workflow Management**

* Snakemake
* Nexflow

**HPC Cloud/Computing**

* LSF
* CUDA

**Relevant Experience**

**Bioinformaticist**: Q2 Lab Solutions, Morrisville, NC

*February 2020-January 2021*

* Evaluate, benchmark, and integrate existing/custom built bioinformatics tools.
* Read, write, and update SOP’s.

**Research Technician (Bioinformatics**): Memorial Sloan Kettering Cancer Center

*February 2020-January 2021*

* Developed novel bioinformatic software tools and algorithms to analyze and generate statistical visualizations for next generation sequencing (NGS) data using Python, R, and machine learning as part of an assay development lab.
* Designed, built, implemented, and maintained standard and custom bioinformatic analysis pipelines to automate commonly used processes.
* Performed in-depth statistical and bioinformatic analysis on biological NGS data by using current bioinformatic methods and packages.
* Researched and utilized novel genomic tools and techniques.
* Collected, managed and performed quality control on NGS data, and performed format manipulation to better utilize the data and scraped public databases.
* Supported two post-docs in planning and analysis of experiments and data.
* Designed a BrdU-calling analysis pipeline using Snakemake.
* Built a data visualization and analysis program to convert bed files into heatmaps and a genome viewer to visualize entire chromosomes by individual reads.
* Developed a pipeline to process Illumina sequencing data with UMI/barcodes to observe 3D genomic organization.
* Developed a program to visualize intrachromosomal interactions and a Circos plot program to visualize genome wide interactions.
* Performed de-novo genome assembly of yeast strain, w303.
* Helped in the annotation pipeline of yeast strain, w303.
* Developed an RNA-Seq pipeline for long-read Nanopore sequencing.
* Helped in the initialize development of a machine learning model to predict replication fork barriers.
* Helped in the development of new yeast strains by doing DNA extraction, transformation, and PCR.
* Prepared DNA libraries for minION nanopore sequencers.
* Prepared cDNA to perform RNA-Seq.
* Performed western and southern blots followed by imaging and analysis.
* Utilized the flow cytometry machine (FACS), and P32 radioactive probes.

**Research Assistant**: Towson University-Department of Biological Sciences

*May 2018-July 2019*

* Studied short opening reading frames (sORF) in E. coli for potential protein expression.
* Assisted in making SPA tagging cassettes, screened transformants for SPA(+)tags using culture plates/PCR, and tested protein expression using western blots.

**OTHER EXPERIENCE**

**Volunteer/Contributor**: UT Health San Antonio, San Antonio, Texas

*November 2020-Present*

* Helping Henry E. Miller, a member of the Bishop Lab, to develop bioinformatics software solutions in the study of cancers and R-loops.
* Integrate IGVjs into a module on a web application.

**Pharmacy Technician**: CVS Pharmacy, Towson, MD

*April 2018-December 2019*

* Processed/filled/dispensed hundreds of written/electronic prescriptions a day.
* Managed inventory by ordering, receiving, and properly storing the medicine.
* Reviewed and processed insurance claims/prescriptions through ScriptPath.

**Web Development Intern**: International Dyslexia Association, Towson, MD

*August 2019-November 2019*

* Updated overall aesthetic using JavaScript, CSS, PHP, and WordPress REST API.
* Implemented and monitored Yoast SEO.

**Volunteer**: Student Helping Honduras, Towson, MD

*August 2017-June 2019*

* Raised $5,000 for the foundation and built schools for children in Honduras.

**Medical Scribe**: Scribe America, Baltimore, MD

*August 2016-November 2017*

* Used EPIC to chart patient histories, present illnesses, vitals, and test results.
* Documented treatments, medications, and discharge/follow-up instructions using the online medical record software.