ERIK BARROSO

SOFTWARE DEVELOPMENT

✉ erikbarroso22@gmail.com   ◎ 115 N. Revena Ann Arbor, MI   🔗 https://github.com/3barr/bioScript

EDUCATION

2014 - 2018

COLLEGE OF WOOSTER

Bachelor of Arts | Computer Science
Concentration in Molecular Biology
and Genetics

QUALIFICATIONS

Python	MySQL
C/C++	PostgreSQL
Java	PHP
R	NGS – Illumina
Matlab	RNA-seq
HTML	HPC
Bootstrap	PBS
CSS	Linux
Ruby on Rails	Git
Javascript	Agile
JQuery	Jira

SKILLS

Work independently or collaboratively
Strong organizational skills
Critical thinker
Problem solver

EXTRACURRICULAR

Member of the Beta Beta Beta Honor
Society for Molecular Biology
Omega Alpha Tau Treasurer
& board member
Varsity Lacrosse player
Community mentor & tutor
Volunteer Youth Ice Hockey
& Lacrosse Coach

EXPERIENCE

Ohio Agriculture Research Development Center
BIOINFORMATICIAN

- Created Python pipeline to streamline job submission for trimming and generate FastQC report on HPC cluster.
- Helped biological researchers navigate Linux, download software on HPC cluster, submit jobs, and analyze data.
- Improved draft genome of Soybean Aphid through De Novo assembly techniques using raw RNA-seq data.
- Evaluated four trimming algorithms, tested on data and analyzed FastQC reports to select the best software.
- Modified Trinity parallel job submission process to conform with software updates. Analyzed Transcriptome assembly using novel visualization software TGNet.

College of Wooster Bioinformatics Group Under Dr. Erzsebet Regan
PROGRAMMER

- Examined large amounts of H3K9me3 genomic data by k means clustering.
- Worked with team of bioinformatician exploring histone modification and epigenetics.
- Used Python to draw information from known CpG islands in mice embryonic stem cells.

University of Michigan Department of Obstetrics & Gynecology
WEB DEVELOPER

- Full stack development of web application, designed layout, built HTML framework and CSS, used JavaScript and Ajax to communicate to back end, where PHP files accessed live database.
- Worked with Physicians to design and build a cross-platform web based interface for their EMR, and Quality Assurance database.
- The web app allows end users to query data on medical cases, flag cases, and input additional data into the database.
- Presented final web application to group of end user Physicians.

ThermoFisher Scientific
PROGRAMMER/DEVELOPER

- GitHub version control and agile software development.
- Developed a natural language processing program using Postgres SQL & Python in which the searching algorithm reviewed over 100,000 reports from Oncology clinical trials and found genomic variant keywords that matched with a therapy.
- Worked closely with a team of scientist/curators to review and analyze database and create presentations.