

ERIK BARROSO

SOFTWARE DEVELOPMENT

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 TGNNet.

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.

✉ erikbarroso22@gmail.com

📍 115 N. Revena Ann Arbor, MI

🔗 <https://github.com/3barr/bioScript>
<https://github.com/UM-USElab/gradecraft-development>

EDUCATION

2014 - 2018

COLLEGE OF WOOSTER

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

QUALIFICATIONS

Python	MySQL
R	PostgreSQL
Matlab	NGS – Illumina
HTML	RNA-seq
Bootstrap	HPC
CSS	PBS
Ruby on Rails	Linux
Javascript	Git
VueJS	Agile

SKILLS

Work independently or collaboratively

Strong organizational skills

Critical thinker

Problem solver

EXTRACURRICULAR

Member of the Beta Beta Beta Honor

Society for Molecular Biology

Varsity Lacrosse player

Community mentor & tutor

Volunteer Youth Ice Hockey

& Lacrosse Coach