Edmund A. **Miller**

✉ edmund.miller@utdallas.edu | ⌂ edmundmiller.dev | ⌸ emiller88

Education

University of Texas at Dallas
Richardson, Texas

M.S. IN BIOTECHNOLOGY
Aug 2018 - May 2019

- Academic Excellence Scholarship 2015-2019
- Fast-Track Program

University of Texas at Dallas
Richardson, Texas

B.S. IN MOLECULAR BIOLOGY
Aug 2015 - Aug. 2018

- Academic Excellence Scholarship 2015-2019
- President's Scholarship 2016-2017
- Continuing Student Scholarship 2017-2018

Experience

Functional Genomics Lab(Prof. Tae Hoon Kim)
Richardson, Texas

RESEARCHER
Jul 2015 - PRESENT

- Created a pipeline to reproduce and create new nacent RNA predictions using Snakemake.
- Mentored undergraduates in rewriting nacent RNA pipeline following nf-core standards
- Used techniques such as containers, conda environments, and high-performance computing clusters.
- Performed RNA isolation from cells that were treated with LPS-particles and used qPCR to quantify eRNA transcript levels.

University of Texas at Dallas
Richardardson, Texas

TEACHING ASSISTANT
May 2021 - Aug 2021

- Created course material
- Taught lab section

Element Biosciences
San Diego, California (Remote)

BIOINFORMATICS ENGINEERING INTERN
June 2021 - Aug 2021

- Converted Internal Whole Genome Sequencing Pipeline from Jupyter and bash scripts to nextflow.
- Performed variant calling for COVID-19 samples.
- Processed 10x spatial transcriptomics data.
- Created internal standards for nextflow modules, multiqc, and pipeline testing.
- Analyzed ERCC spike-in data.

Olypsis Technologies
Dallas, Texas (Remote)

BLOCKCHAIN SOFTWARE DEVELOPER
May 2018 - May 2020

- Lead developement and design of completing tasks including, creating a functioning test suite for legacy code, containerizing the entire system, designing and implementing a REST API and Smart contracts for the system.
- Created a novel ERC20 payment splitter Smart contract in Solidity for Digital Assets Foundry.
- Developed the DAWN protocol to transfer files in a peer to peer fashion, that is decentralized and does not rely on a 3rd party to be trusted using Whisper, IPFS, AES256, and React.

Projects

mlf-core *Preprint*
CORE *Jan 2021 - PRESENT*
- Deterministic machine learning project templates based on MLflow.

nf-core *GitHub Page*
MODULES TEAM *Mar 2020 - PRESENT*
- Maintaining nf-core/nascent
- October and March hackathon organizing team and mentor
- Lead Creation of unit and e2e tests and CI refactoring for DSL2 Modules.

Doom-Emacs *GitHub*
CONTRIBUTOR *Mar 2018 - PRESENT*
- Worked on Reference, Conda, and Solidity modules.
- Maintaining several personal modules such as Snakemake and LSP language support.

edgePy *GitHub*
CONTRIBUTOR *Sep 2018 - PRESENT*
- A Python implementation of edgeR for differential expression analysis.
- Implementing code and testing standards to the repo.

emacs-jest *GitHub*
MAINTAINER *Dec 2018 - PRESENT*
- A package to run Jest testing inside of emacs with a magit popup.