Tim Farrell

502 S 49th St, Philadelphia PA 19143 (856) 904-6017
https://tmfarrell.github.io tfarrell01@gmail.com

Summary

- MS in Bioinformatics with 3 years experience developing/ deploying data management and analysis software in biomedical/ clinical/ biotech research environments.
- Creative, results-focused and capable of working on multiple projects simultaneously.

Education

Master of Science, Bioinformatics, Boston University, 2014-2016
Project: *Clinical sequencing classifier for structurally-variant phenotypes*
Activities: West End Boys and Girls Club STEM Tutor
GPA: 3.02/ 4.0

Bachelor of Science, Biomedical Engineering, Rutgers University, 2008-2012
Project: *Optimization of localizable stem-cell immunotherapeutic*
Activities: Army ROTC, Rutgers Future Scholars Mentorship Program
GPA: 3.31/ 4.0

Skills Summary

Math/Stats/CS: descriptive/ inferential stats, probabilistic graphs, machine learning, graph theory, time series, casual modeling (some)

Bioinformatics: standard tools (samtools, bedtools, etc.), NGS experiment design/ data analysis, pipeline development/ management

Programming:

Data management: SQL, PostgresSQL, SQLite

Operating systems: Unix-like (preferred), Windows

Data analytics: R/ ggplot, pandas/ matplotlib/ scikit-learn, MATLAB, high-performance

Languages: Python, shell, Java, C/C++, Haskell, Ruby (some), Javascript HTML/ CSS (some)

Relevant Experience

Research Assistant, Boston University, 2015-2016
Quantitative Neuroscience Lab, Dept. of Health Sciences
- Built pre-processing and preliminary analysis pipeline for dynamic functional connectivity study of Human Connectome Project data. Repository.
- Resulting pipeline processed 2000 2GB images in under 6 hours on HPC cluster.

Biomedical Informatics Intern, Harvard Medical School, 2015-2016
Laboratory of Personalized Medicine, Dept. of Biomedical Informatics
- Engineered a genomics-based classifier for blood antigen haplotypes, using NGS/ 3GS technologies and data.
- Most performant classifier achieved 81% accuracy for composite antigenic phenotype prediction.

Bioinformatics Intern, New England Biolabs, 2015
Genomic Research Divison
- Investigated error mitigation applications for third-generation sequencing (3GS) tech.
- Implemented, streamlined and executed sequencing and computational workflows.

Research Assistant, Boston University School of Medicine, 2014-2016
Primate Circadian Rhythm Lab, Dept. of Anatomy and Neurobiology
- Automated data recording, management and analysis infrastructure for 24-primate study, replacing spreadsheet-based setup with a database. Repository.
- Reduced raw data footprint by 125 times and simplified automatic data reporting with SQL.