

# TIM FARRELL

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<https://tmfarrell.github.io>

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## SUMMARY

- Biomedical data engineer/ scientist with 4+ years technical experience.
  - 5+ years organizational management experience as US Army Reserves Medical Services Officer.
  - Motivated, creative, organized and quality-obsessed.
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## EDUCATION

**Master of Science, Bioinformatics**, Boston University, 2014-2016

Project: *Clinical sequencing antigenic classifier for structurally-variant genotypes*

GPA: 3.02/ 4.0

**Bachelor of Science, Biomedical Engineering**, Rutgers University, 2008-2012

Project: *Optimization of localizable stem-cell-based immunotherapeutic*

GPA: 3.31/ 4.0

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## TECHNICAL SKILLS

*Software development tools*: Trello, git, docker, Jira, Google Cloud

*Web development*: Flask, Django, Bootstrap, React, Google App Engine

*Languages*: Python, shell, SQL, R, Java, C/C++, Javascript, Haskell, Racket

*Bioinformatics*: samtools, bedtools, pysam, bwa, GATK, WDL, FireCloud, vcftools, pyvcf, Hail

*Data science*: PyData stack (pandas, matplotlib/seaborn, scikit-learn), jupyter, Keras, TensorFlow

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## EXPERIENCE

**Assoc. Computational Biologist I**, Broad Institute of MIT and Harvard, 2017-present

Provide genomics data processing, management and analysis expertise to Malaria Group, Infectious Disease and Microbiome Program. Projects include:

- analyzing/ managing 60K+ amplicon sequencing samples from vaccine clinical trial;
- developing **3 genomic analysis pipelines** and deploying to cloud-based platform (FireCloud);
- processing ~200-300+ samples/ month through the above pipelines for various projects; and
- developing web interfaces for group computational tools (**[broad.io/coil](https://broad.io/coil)**).

**Medical Services Officer (Reservist)**, US Army Reserves/ National Guard, 2012-present

Part-time (2-4 days/ month + 2-4 weeks/ year) military leader. Positions include Battalion Medical Operations Officer, Company Executive Officer and **Health Services System Manager** (current).

**Operations Officer (Activated Reservist)**, US Army Reserves, 2016-2017

Deployed for 9-month tour overseas. 2nd-in-command for 80-Soldier Battalion Headquarters Company. Managed subordinate leaders, planned/ supervised unit operations and designed/ implemented policy.

**Biomedical Informatics Intern**, Harvard Medical School, 2015-2016

Engineered **genomics-based classifier** for blood antigen haplotypes using NGS + 3GS technologies.

**Research Assistant**, Boston University, 2015-2016

Built **data processing pipeline** for functional connectivity study of Human Connectome Project data.

**Research Assistant**, Boston University School of Medicine, 2014-2015

Built automated **data management and analysis system** for 24-primate drug metabolism study.