

TIMOTHY M. FARRELL

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OBJECTIVE	Bio/ bioinformatics/ biomedical engineer position in biotech/ medtech industry.
SUMMARY	Bioengineer with computational and wetlab skill. Most interested in the intersection of automation and biomedicine/ bioengineering.

EDUCATION	<p>Master of Science, Bioinformatics, Boston University, 2014-2016 Project: <i>Clinical sequencing classifier for highly-polymorphic genes</i> Activities: West End Boys and Girls Club Tutor GPA: 3.03/ 4.0</p> <p>Bachelor of Science, Biomedical Engineering, Rutgers University, 2008-2012 Project: <i>Optimization of localizable stem-cell immunotherapeutic</i> Activities: Army ROTC, Rutgers Future Scholars Mentorship Program GPA: 3.31/ 4.0</p>
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SKILLS	<p>Laboratory: Genomic library prep, PCR, ELISA, confocal microscopy, cell culture</p> <p>Math/ Stats/ CS: machine learning, predictive modeling, signal processing, time series, stochastic models, graphical models</p> <p>Bioinformatics: standard tools (samtools, bedtools, etc.), NGS/ 3GS data, expression data, neuroimaging data, clinical/ biomedical data</p> <p>Programming: Operating systems: Unix-like (preferred), Windows General purpose: Python, shell scripting, C++/C, Java/C#, Haskell/ ML Data analytics: Python (pandas/ matplotlib), R, MATLAB/ Octave; PostgreSQL, SQLite</p>
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RELEVANT EXPERIENCE	<p>Research Assistant, Sept 2015 - May 2016 Dept. of Health Sciences, Boston University Built high-performance preprocessing and preliminary analysis pipeline for dynamic functional connectivity study of Human Connectome Project data (Jason Bohland, PhD). Produced a fast, memory-efficient system that processed 2000 brain images in under 6 hours on a HPC cluster.</p> <p>Biomedical Informatics Intern, Aug 2015 - May 2016 Dept. of Biomedical Informatics (DBMI), Harvard Medical School (HMS) Worked to develop a clinical sequencing classifier for blood antigen haplotypes, using both NGS and 3GS data/ technologies. Supervised by Peter Tonellato, PhD (DBMI, HMS) and collaborated with William Lane, MD PhD (Dept. of Pathology, Brigham Women's Hospital).</p> <p>Bioinformatics Intern, May - Aug 2015 Genomic Research Division, New England Biolabs (NEB) Investigated development of error mitigation applications for emerging third-generation sequencing technologies (3GS). Setup and streamlined sequencing and computational workflows, facilitating future related work at NEB.</p> <p>Research Assistant, Dec 2014 - Jan 2016 Dept. of Anatomy and Neurobiology, Boston University Medical Center (BUMC) Built the data logging, management and analysis infrastructure for a 24-primate study conducted by the BUMC Primate Circadian Rhythm Lab (Irina Zhdanova, MD PhD). Assisted with design and construction of custom laboratory equipment to facilitate data acquisition.</p>
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