Ross Donatelli

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TECHNICAL SKILLS

Analysis Techniques: Model fitting, Regression, Supervised Learning, Expectation Maximization
Programming Languages: Java, R, Ruby, JavaScript, MATLAB, Octave, Python, C++, PHP
Frameworks, Tools, & Software: Git, D3, VirtualBox, Ruby on Rails, XCode (iOS), Android Studio, Apache, Tomcat, Docker
Database Technologies: Amazon Web Services (S3, DynamoDB & Elastic Beanstalk), SQLite, Pythia (OSU developed), PostgreSQL

RELEVANT EXPERIENCE

Data Analysis Engineer   September 2017 - Current
JMI Laboratories   North Liberty, IA

- Consolidate data for scientific publications on antimicrobial surveillance data through PostgreSQL and Ruby, and provided additional features for Ruby on Rails application
- Analyze data with artificial intelligence and statistical methods, including Gaussian Mixture Models, Nonlinear fitting, Logistic Regression, etc.
- Develop and maintain web application for chemical calculations of antimicrobial panel production
- Visualize data and analysis with graphics in Javascript (D3), R, Python, and Ruby

Ohio State Graduate Research & Teaching Assistantship   August 2015 – August 2017
The Ohio State University   Columbus, OH

- *Numerical Methods for Determining Multistationarity in Chemical Reaction Networks*
- Experimented with numerical sampling methods to determine stable states of a system of polynomial equations
- Coordinated the lecture and grading of Introduction to Computer Programming in Java

Analytical Software Intern   May - August 2015 & 2017
ENSCO, Inc.   Melbourne, FL

- Researched statistical analysis of patterns using Machine Learning and other techniques in R for various applications and optimizations
- Produced tools using Java and RESTful services

Student Research Intern   May 2014 - July 2014
North Carolina State University   Raleigh, NC

- *Computational Model of the Thyroid Hormone Homeostasis and its Manipulation by Chemicals*
- Created a PBPK Model describing the dynamics of PTU in the body using ODE solvers and visualizations in MATLAB

Student Research Intern   May 2013 - August 2013
Virginia Bioinformatics Institute, Virginia Polytechnic Institute   Blacksburg, VA

- *A Regulatory DNA Mismatch Repair Network and the Role of MicroRNAs*
- Established a Boolean model of network interactions of DNA mismatch repair to calculate robustness of microRNAs
- Presented at MBI Capstone Conference at The Ohio State University

EDUCATION

Masters of Science, Computer Science, Study - Artificial Intelligence   GPA: 3.60/4.0, Graduate Fellow
The Ohio State University, Columbus, OH   August 2017

Bachelors of Science, Biomathematics, Minor - Computer Science   GPA: 3.85/4.0
Florida Institute of Technology, Melbourne, FL   May 2015

ORGANIZATIONS, HONORS, & AWARDS

2015 - 2016 The Ohio State University Fellowship Recipient
2013 - 2015 Allen S Henry Scholarship Recipient
2014 - 2015 Distinguished Student
2011 - 2013 Florida Tech NCAA Swim Team Division II - Team Captain