

# Jennifer Hammelman | CV

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📄 [jhammelman.github.io](https://jhammelman.github.io)

## Education

### Tufts University

*B.S. in Biology and Computer Science, GPA – 3.73 Deans' List*

### Arts and Sciences

*2012–2016*

#### Biology

- General Chemistry
- General Genetics
- Molecular Biology
- Developmental Biology
- Ecological Models and Data
- Independent Research

#### Computer Science

- Data Structures
- Programming Languages
- Algorithms
- Machine Learning
- Computational Biology

#### Mathematics

- Discrete Mathematics
- Calculus I and II
- Linear Algebra

## Experience

### Research.....

#### CENTER FOR REGENERATIVE AND DEVELOPMENTAL BIOLOGY

*Research Assistant*

#### Tufts University

*Sept 2014–Present*

Member of Levin lab under Vannevar Bush Professor of Biology Michael Levin. Developed novel computational solutions for modeling regeneration pathways in the planarian flatworm.

Projects:

- Artificial intelligence tool to suggest missing-components for planarian regeneration models. Resulted in 10 page project report and command-line tool.
- Dynamic artificial neural network modeling development and regeneration. Will result in 15-20 page project report and Matlab code.

#### DEPARTMENT OF COMPUTER SCIENCE

*Research Assistant*

#### Tufts University

*Jun 2014–Aug 2014*

Member of Bioinformatics and Computational Biology research group under Assistant Professor Ben Hescott. Set groundwork for network analysis of differential genetic interactions using epistatic miniarray profile data. Applied the department's current similarity metric algorithm developed for assigning function to protein-protein interaction networks, diffusion state distance (DSD) to genetic interaction networks.

Responsibilities:

- Reviewing primary literature on imputation and differential analysis of genetic interactions
- Developing program for running DSD on genetic interaction datasets
  - Parsing genetic interactions from differential datasets and databases
  - Running multiple statistical tests on DSD results
  - Determining and visualizing interactions of interest
- Preparing data for grant proposal

## Instructional.....

### DEPARTMENT OF COMPUTER SCIENCE

### Tufts University

*Teaching Assistant*

*Jan 2014–Present*

Teaching assistant for: Data Structures (COMP 015), Programming Languages (COMP 105) for various semesters.

Responsibilities:

- Preparing mini-lectures for laboratories on data structures: Dynamic Arrays, Linked Lists, Hash Tables, Binary Trees
- Grading Projects
- Holding office hours: Debugging project assignments by identifying logical and semantic errors, explaining course material, and advising on design strategies

## Vocational.....

### TYCO INTERNATIONAL

### Princeton, New Jersey

*Shared Services Intern*

*Jun 2013–Aug 2013*

Member of a core project team focused on global implementation of BlackLine Account Reconciliation software for finance. Utilized Access SQL to create an efficient system for data manipulation and management.

Responsibilities:

- Consolidating Accounts Payable balance sheets
- Writing SQL queries in Access for importing user information from excel spreadsheets into BlackLine online software
- Developing a user manual for all BlackLine system accounting roles
- Planning presentation of culmination of intern work for the Finance Department

## Computer skills

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**Languages:** PYTHON, C++, C, MATLAB, R, HTML, CSS

**Tools:** Microsoft Sharepoint, Adobe inDesign, L<sup>A</sup>T<sub>E</sub>X, Microsoft Excel

## Awards

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**2015:** Tufts nominee for Goldwater Scholarship