

# Alexandra E. Dalton

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## EDUCATION AND AWARDS

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**Dartmouth College**, Hanover, New Hampshire 2012-2016  
Bachelor of Arts: *Major in Computer Science Modified with Biology*  
Citation for Academic Excellence, Computer Science 050 2014  
Computational Research Grant, the Neukom Institute at Dartmouth College 2015

## EXPERIENCE

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**BOOST! Tutors** 2015-Present  
Hanover, New Hampshire

- Lead and founding engineer on team dedicated to developing a virtual classroom application to connect volunteer student tutors to students
- Node.js application built with Express and Socket.io with client-side RTC and interactive whiteboard functionality

**Dartmouth Hitchcock Medical Center** 2014-Present  
Laboratory of Dr. A. Hoen, PhD

- Applied computational and statistical methods in R on epidemiology study of infant microbiomes
- Utilized applications of graph theory to generate networks and clusters of bacterial taxa and covariates

**Washington University in St. Louis School of Medicine** Summer 2015  
Laboratory of Dr. A. Dhand, MD DPhil

- Developed applications of face detection algorithm in Matlab to process data generated by body cameras and analyze patient social networks
- Created various tools to facilitate the research process including in-house applications in Java and bash scripts

**Geisel School of Medicine at Dartmouth** 2014-2015  
Laboratory of Dr. C. Cheng, PhD

- Conducted statistical analysis and worked with hazard models in R to develop prognostic algorithm for patients with prostate cancer

**Dartmouth Hitchcock Medical Center** 2012-2013  
Laboratory of Dr. J. Moore, PhD

- Worked with raw data and applied computational methods in R to analyze networks and identify patterns in gene expression data to better understand the origins of bladder cancer

## SKILLS AND ACTIVITIES

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- **Programming Languages:** Python, R, C, C++, Java, JavaScript, Matlab
- **Web Applications:** Flask, Ruby on Rails, Bootstrap, HTML5, CSS3/LESS, JSON, Node.js, Backbone.js, Express, Socket.io, Mongo, PostgreSQL
- **Tools:** Unix/Linux, Git, Bash, Grunt, Emacs
- **Extracurricular:** Dartmouth Undergraduate Journal of Science, Women in Computer Science, *The Dartmouth* Graphics Staff, Webmaster for various campus organizations