

# Nadine HUSSAMI

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## CURRENT POSITION

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Aug 2018 - present      CTRL-LABS, NEW YORK.  
Scientist.

## EDUCATION

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Jan 2013 - Dec 2017      STANFORD UNIVERSITY  
PhD in Electrical Engineering, PhD minor in Statistics.  
Advisors: Professors Robert Tibshirani and Anshul Kundaje.  
*Selected coursework:* Statistical learning, Advanced convex optimization, Inference estimation and information processing, Discrete data analysis.

Sep 2009 - June 2011      STANFORD UNIVERSITY  
MS in Electrical Engineering.  
*Selected coursework:* Computational genomics, Convex optimization, Linear models, Information theory, Statistical signal processing.

Sep 2005 - June 2009      AMERICAN UNIVERSITY OF BEIRUT (AUB), Lebanon.  
BS in Electrical and Computer Engineering. Minor in Mathematics.  
Graduated with distinction.

## EXPERIENCE

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Jun 2015 - Sep 2015      H2O.AI  
Intern in the engineering team. Implemented solvers for GLMs on the H2O parallel processing platform: coordinate descent and multinomial logistic regression.

Jan 2013 - Dec 2017      STANFORD UNIVERSITY  
Teaching assistant for Deep learning in genomics and biomedicine, Statistical and machine learning methods for genomics, Statistical signal processing, Artificial intelligence, Computational genomics and Social network analysis.

Jan 2012 - Dec 2012      BINA TECHNOLOGIES (ACQUIRED BY ROCHE, 2014)  
Bioinformatics and algorithm development engineer. Worked on developing new statistical methods for detecting structural variations in the genome.

Jul 2011 - Dec 2011      MITSUBISHI ELECTRIC RESEARCH LABORATORIES (MERL)  
Intern in the algorithms research group. Worked on map compression.

June 2010 - Aug 2010      CORNELL UNIVERSITY  
Research internship under Professor Aaron Wagner. Worked on deriving information theoretic properties of exponential server queues.

June 2008 - Sep 2008      ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL), Switzerland  
Research internship under Professor Ruediger Urbanke. Implemented iterative decoding methods for polar codes to improve decoding error probability bounds.

## PUBLICATIONS

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Boxiang Liu, Nadine Hussami, Avanti Shrikumar, Tyler Shimko, Salil Bhate, Scott Longwell, Stephen Montgomery and Anshul Kundaje **A multi-modal neural network for learning cis and trans regulation of stress response in yeast** Presented at *NIPS MLCB*, 2017.

Peyton G. Greenside, Nadine Hussami, Jessica Chang and Anshul Kundaje **PyBoost: A parallelized Python implementation of 2D boosting with hierarchies** *BioArxiv*, 2017.

Nadine Hussami and Robert Tibshirani **A Component Lasso** *The Canadian Journal of Statistics*, 2015.

**An Integrated Encyclopedia of DNA Elements in the Human Genome** *The ENCODE Project Consortium, Nature, 2012.*

Nadine Hussami, Satish Korada and Ruediger Urbanke **Polar Codes for Channel and Source Coding** *International Symposium on Information Theory (ISIT), 2009.*

## AWARDS

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Sep 2014 - Aug 2015      Simons Graduate Research Assistantship.  
Sep 2009 - Dec 2009      Association Philippe Jabre Scholarship.

## SKILLS

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Prog. Languages      R, Python, C++,  $\LaTeX$ , Java, Matlab, SQL.  
Languages      Fluent in English, French and Arabic. Intermediate in Spanish.  
Personal Interests      Long distance running (SF half marathon 2012), playing the piano (performed at AUB 2005/2007), runner-up in the Lebanese Badminton Championship (2005).