

# Cyrus Cousins

Curriculum Vitae: 2019

## PERSONAL DETAILS

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*Birth:* December 31, 1992      *Mail:* [cyrus\\_cousins@brown.edu](mailto:cyrus_cousins@brown.edu)  
*Home:* 376 Benefit Street, Providence RI      *Web:* [cs.brown.edu/people/ccousins/](http://cs.brown.edu/people/ccousins/)  
*Phone:* (401) 487-3104      *Code:* [www.github.com/cyruscousins/](http://www.github.com/cyruscousins/)

## EDUCATION

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**Doctorate of Philosophy** 2015+  
BROWN UNIVERSITY  
Working toward PhD in Computer Science. **Cumulative GPA: 4.00**

**Master's** 2015-2017  
BROWN UNIVERSITY  
Master of Science in Computer Science. **Cumulative GPA: 4.00**

**Baccalaureate** 2011-2015  
TUFTS UNIVERSITY  
B.S. in Computer Science, Mathematics, and Biology. **Cumulative GPA: 3.69. CS GPA: 3.98**

## WORK EXPERIENCE

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**Research Intern** Summer 2019  
*Two Sigma Labs, under Professor Larry Rudolph*  
Research in game-theoretic multi-agent reinforcement learning.

**Graduate Teaching Assistant** Fall 2018  
*Eli Upfal @ Brown University*  
Recitations, course, and assignment design for an introductory computer science probability course.

**Research Intern** Summer 2018  
*Two Sigma Labs, under Professor Matteo Riondato*  
Research in statistical significance and statistical modeling techniques.

**Graduate Teaching Assistant** Spring 2018  
*Eli Upfal and Dan Potter @ Brown University*  
Lecturing, course, and assignment design in machine learning, statistical inference, and data science.

**Research Assistant** 2016+  
*BIGDATA group, Brown University, under Professor Eli Upfal*  
Research in machine learning, with a focus on statistical significance and Rademacher complexity.

**Research Assistant** 2014-2017  
*BCB group, Tufts University, under Professor Donna Slonim*  
Algorithms for anomaly detection in high-dimensional small-sample biological systems.

**Graduate Teaching Assistant** Fall 2016  
*Sorin Istrail @ Brown University*  
Office Hours, lecture notes, assignment creation, and grading for introductory Computational Biology.

**Research Assistant** 2015-2016  
*Raphael Lab, Brown University, under Professor Benjamin Raphael*  
Working with single-cell sequencing data and phylogeny reconstruction with cancer data.

**Research Assistant** Summer 2015  
*PPAML, Under Professors Norman Ramsey (Tufts) and Mitchell Wand (Northeastern)*

Design and implementation of inference systems and sampling algorithms for general-purpose probabilistic programming, with the DARPA *Probabilistic Programming for Advanced Machine Learning* initiative.

**Teaching Assistant**

2013-2015

*Greg Aloupis @ Tufts University*

Grading and office hours for Algorithms and Computational Geometry courses.

**Teaching Assistant**

2013-2015

*Donna Slonim @ Tufts University*

Lab administration, assignment creation, project development, and office hours for Comp. Bio. courses.

**Test engineer (2013) and Software Developer (2014) Intern**

Summer 2013-14

*Microsoft Corporation*

**Embedded Systems Test Engineer Intern**

Summer 2012

*BBN Technologies*

## **PUBLICATIONS**

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Cyrus Cousins and Matteo Riondato. “CaDET: Interpretable Parametric Conditional Density Estimation with Decision Trees and Forests”. In: *Machine Learning*. 2019

Enrique Areyan Viqueira, Cyrus Cousins, Yasser Mohammad, and Amy Greenwald. “Empirical Mechanism Design: Designing Mechanisms from Data”. In: *Uncertainty in Artificial Intelligence*. 2019

Enrique Areyan Viqueira, Amy Greenwald, Cyrus Cousins, and Eli Upfal. “Learning Simulation-Based Games from Data”. In: *Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems*. International Foundation for Autonomous Agents and Multiagent Systems. 2019, pp. 1778–1780

Carsten Binnig, Benedetto Buratti, Yeounoh Chung, Cyrus Cousins, Tim Kraska, Zeyuan Shang, Eli Upfal, Robert C Zelezniak, and Emanuel Zraggen. “Towards Interactive Curation & Automatic Tuning of ML Pipelines.” In: *DEEM@ SIGMOD*. 2018

Cyrus Cousins, Christopher M Pietras, and Donna K Slonim. “Scalable FRaC Variants: Anomaly Detection for Precision Medicine”. In: *IPDPSW*. IEEE. 2017, pp. 253–262

Cyrus Cousins and Eli Upfal. “The  $k$ -Nearest Representatives Classifier: A Distance-Based Classifier with Strong Generalization Bounds”. In: *DSAA*. IEEE. 2017

## **HONORS**

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**Senior Thesis (Tufts University)**

2015

HIGHEST HONORS

Highest honors for undergraduate thesis on anomaly detection in biological systems.

**Computer Science Exchange Officer**

2012-2015

Officer of Tufts University’s only student-run computer science interest group.

**Dean’s List**

2011-2015

Dean’s List, all full-time undergraduate semesters.

**COMAP Mathematical Contest in Modeling**

2014

HONORABLE MENTION

Paper, computer model, and simplified Poisson model of highway lane usage.

**COMAP Mathematical Contest in Modeling**

2013

SUCCESSFUL PARTICIPANT

Simulation and paper on modeling heat transfer during cooking of baked confections.

**National Honor Society**

2011

## **SKILLS**

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*Programming Languages*

**Fluent:** C, C++, PYTHON, C#, JAVA, HASKELL, METALANGUAGE.

**Familiar:** R, MATLAB, RACKET, PROLOG, GO, F#, SQL, GLSL.