

Alexis Cook

CONTACT INFORMATION	Brown University Division of Applied Mathematics 182 George Street Providence, RI 02912	Email: alexis_cook@brown.edu Nationality: USA Website: https://alexisbcook.github.io
RESEARCH INTERESTS	Bayesian Nonparametrics, Machine Learning, Computer Vision, Applied Probability	
OBJECTIVE	<i>I am currently seeking a machine learning internship for Summer 2017.</i>	
EDUCATION	Brown University , Providence, RI, USA August 2014 – Present <ul style="list-style-type: none">• Ph.D., Applied Mathematics• Relevant Coursework: Levy Processes, Probability Theory, Measure Theory, Functional Analysis• Master of Science, Computer Science August 2014 – May 2016• Relevant Coursework: Probabilistic Graphical Models, Computer Vision, Reinforcement Learning University of Michigan-Ann Arbor , Ann Arbor, MI, USA August 2012 – August 2014 <ul style="list-style-type: none">• Master of Science, Applied and Interdisciplinary Mathematics• Relevant Coursework: Machine Learning, Numerical Linear Algebra, Complex Analysis Duke University , Durham, North Carolina August 2006 – May 2010 <ul style="list-style-type: none">• Bachelor of Science, Mathematics; Second Major: Russian Language and Culture	
RESEARCH PROJECTS	Brown University , Providence, RI, USA August 2015 – January 2016 <i>Variational Inference for Poisson-Gamma Process Mixture Models</i> Brown University , Providence, RI, USA November 2015 – December 2015 <i>Nonparametric Approaches to Clustering Sign-Language Video Sequences</i> Brown University , Providence, RI, USA August 2015 – December 2015 <i>The Infinite Partially Observable Markov Decision Process</i> Kobe University , Kobe, Japan July 2015 – August 2015 <i>Computer Simulations on Rocket-Plasma Interactions</i> Brown University , Providence, RI, USA August 2015 – December 2015 <i>Connectome Inference</i> MIT Lincoln Laboratory , Lexington, MA, USA June 2014 – August 2014 <i>Detecting Subgraphs Beneath the Noise Floor with Sparse PCA</i> University of Michigan-Ann Arbor , Ann Arbor, MI, USA May 2012 – May 2014 <i>Multiscale Model of Anti-Bcl-2 and Anti-Mitotic Drugs</i> Duke University , Durham, NC, USA May 2008 – December 2008 <i>Eigenvalues of Tridiagonal Matrices: Application to Neuronal Transport</i>	
PUBLICATIONS	“An Integrated Cellular and Sub-cellular Model of Cancer Chemotherapy and Therapies that Target Cell Survival”, Mathematical Biosciences and Engineering, Volume 12, Issue 6, December 2015, Pages 1219-1235.	
CONFERENCE TALKS	Rackham Summer Institute Symposium, University of Michigan <i>Mathematical modeling of combination chemotherapy</i>	August 2012

TEACHING
EXPERIENCE

Division of Applied Mathematics, Brown University
Teaching Assistant for Recent Applications of Probability and Statistics

Spring 2016

Department of Mathematics, University of Michigan-Ann Arbor

- Gave lectures three days per week for students of varying backgrounds and needs
- Graded assignments and exams for thirty calculus students

Instructor for Calculus I

Fall 2013

Instructor for Calculus I

Winter 2013

Instructor for Calculus I

Fall 2012

HONORS AND
AWARDS

2013–2016 National Science Foundation Graduate Research Fellowship
 2012–2014 Marjorie Lee Browne Scholarship
 2008 Goldman Sachs Fellowship
 2008 American Economic Association Minority Scholarship
 2008 Mellon Mays Fellowship
 2006–2010 Angier B. Duke Scholarship

PROGRAMMING
LANGUAGES

Python, HTML, CSS, Matlab

PROFESSIONAL
ASSOCIATIONS

2014–Present Association for Women in Mathematics
 Presenter, Brown Chapter Graduate Panel (October 2015)
 2012–Present Society for Industrial and Applied Mathematics
 Vice President, University of Michigan Student Chapter (2012–2013)
 2012–Present American Mathematical Society

OUTREACH AND
SERVICE

2014–Present Member, Rose Whelan Society
 2014–Present Member, Math CoOp
 2014–Present Mentor, ALANA