

Andy Shi

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Education

Harvard Graduate School of Arts and Sciences , Cambridge, MA Ph.D. student in Biostatistics	2016–2021 (Expected)
Harvard Paulson School of Engineering and Applied Sciences , Cambridge, MA S.M. in Computational Science and Engineering (CSE)	2015–2016
Harvard College , Cambridge, MA A.B. in Statistics, <i>magna cum laude</i> GPA: 3.87/4.0	2012–2016
John P. Stevens High School , Edison, NJ GPA: 4.1/4.33	2008–2012

Research Interests

I'm interested in developing new and efficient statistical methods for big data, especially those arising from biological experiments. I'm currently working on statistical genetics, advised by Professor Xihong Lin.

Research Experience

Xihong Lin Group , Harvard Chan School of Public Health, <i>PhD Researcher</i>	Boston, MA June 2017–Present
Developing method to test for multiple phenotype–multiple genotype association. Analyzing gene expression and genotype data using R and Python.	
Huttenhower Lab , Harvard Chan School of Public Health <i>Undergraduate Researcher</i>	Boston, MA January 2014–May 2016
Collaborated with biologists to build statistical and computational tools to analyze microbiome data. Developed software to de-noise and sort metagenomic sequencing data (http://huttenhower.org/kneaddata) and investigated power calculations in this context (https://bitbucket.org/andys314/power-calculations).	
Yang Pengyuan Lab , Fudan University <i>Summer Research Student</i>	Shanghai, China June 2013–August 2013
Correlated proteomes of liver cancer cells and their metastatic potentials using mass spectrometry. Worked under the direction of Harvard and Fudan professors in a study abroad program.	

Awards/Honors

John Harvard Scholar	2014–2015 School Year
Harvard College Research Program (HCRP) Fellow	January 2015–August 2015
Howard Hughes Medical Institute (HHMI) Interdisciplinary Undergraduate Fellow	2014–2015

Harvard College Program for Research in Science and Engineering (PRISE) Fellow Summer 2014
Harvard Microbial Sciences Initiative (MSI) Undergrad Summer Research Fellow Summer 2014

Research Talks

- Shi, Andy. “Software for Principled Quality Control of Sequencing Data.” Presented at PRISE Final Presentation and MSI Poster Session, August–September 2014.

Teaching

Harvard University Statistics Department
Teaching Fellow

Cambridge, MA
September 2015–May 2016

Taught sections for intro statistics course for biology majors and intro data science course for undergrads and masters students. Held weekly office hours, responded to questions on online Q&A platform, and guided students through problem sets and code debugging.

Harvard University Bureau of Study Counsel
Peer Tutor & ESL Peer Consultant

Cambridge, MA
September 2013–May 2014

Coached students in introductory computer science in a one-on-one setting. Also helped international graduate students practice conversational English and become familiar with American culture.

Skills

Programming: Proficient in R, Python, C, OCaml, Bash shell scripting. Familiar with PHP, Java, MySQL, Javascript, MATLAB, Mathematica, \LaTeX , Unix operating systems.

Languages: English (native), Mandarin Chinese (proficient), French (working proficiency).