# Cody Austun Coleman

Gates Computer Science Building – 353 Serra Mall – Stanford, CA 94305

📱+1 (617) 564 0648 • ✉ cody.coleman@cs.stanford.edu • Last Updated: 2019/10/03

## Education

**Stanford University**                                                                                                      **Stanford, CA**
*Doctor of Philosophy in Computer Science, 4.0/4.0*                                        *September 2016–Present*
Supervisor: Matei Zaharia and Peter Bailis

**Massachusetts Institute of Technology (MIT)**                                                              **Cambridge, MA**
*Master of Engineering in Electrical Engineering and Computer Science, 5.0/5.0*    *September 2013–Feburary 2015*
Supervisor: Isaac Chuang

**Massachusetts Institute of Technology (MIT)**                                                              **Cambridge, MA**
*Bachelor of Science in Electrical Engineering and Computer Science, 4.9/5.0*       *September 2009–June 2013*

## Experience

### Research

**Stanford,** DAWN Project                                                                                            **Stanford, CA**
*Researcher*                                                                                                                  *June 2017–Present*
- Founded MLPerf with researchers and engineers from Google, Harvard, and Baidu and gained the support of over 50 organizations
- Led DAWNBench, an end-to-end deep learning benchmark and competition, to an over a $1000\times$ improvement in ImageNet training time with outside submissions from teams including Google, fast.ai, Intel, and Alibaba

**MIT,** Office of Digital Learning and MITx                                                                 **Cambridge, MA**
*Research Assistant*                                                                                                *Feburary 2013–Feburary 2015*
- Investigated teacher enrollment in HarvardX and MITx courses in order to redefine the target audience of MOOCs
- Distilled tracking log information from the edX platform into informative features about student behavior and performance
- Adapted Latent Dirichlet Allocation (LDA) from natural language processing to uncover behavioral patterns in Massive Open Online Courses (MOOCs) and accurately predict student drop out

**Harvard University,** HarvardX                                                                               **Cambridge, MA**
*Research Assistant*                                                                                                *November 2013–May 2014*
- Explored the impact of spaced study sessions (inspired by spaced practice phenomenon) in HarvardX courses

### Professional

**Jump Trading,** Vendor Data Group                                                                          **Chicago, IL**
*Junior Data Scientist*                                                                                              *June 2015–August 2016*
- Constructed frameworks and pipelines to analyze data from a variety of vendors to automatically create and update security master, corporate actions, pricing and entity master data
- Communicated internally and externally to understand needs, identify opportunities, diagnose problems, and maintain reliability

**Davidson College,** DavidsonX and DavidsonNext                                                   **Davidson, NC**
*Educational Technology Consultant*                                                                    *March 2015–June 2015*
- Automated data processing for 5 DavidsonX Massive Open Online Courses (MOOCs) and 64 DavidsonNext blended AP courses

**Google,** Associate Product Manager (APM) Internship                                       **Zurich, Switzerland**
*YouTube Analytics Intern*                                                                                      *June 2012–August 2012*
- Managed a team of 12 to launch estimated time watched and metric comparisons across the world
- Designed initial draft of playlist analytics for YouTube's curators
- Collaborated with numerous teams in YouTube to deal with issues concerning publicity, privacy, accessibility and discovery

**Google,** Building Opportunity in Leader Development (BOLD) Internship            **Mountain View, CA**
*Local Search Quality Intern*                                                                                   *June 2011–August 2011*
- Programmed tools for large-scale data manipulation and analysis to expedite and improve spam detection in Google Places
- Created and administered training documents, videos, exercises, and workshops globally for both R and Google BigQuery

**MISTI Mexico,** Iniciativa OCW                                    **Mexico City, Mexico**
*Web Developer & Team Representative at el Tecnológico de Monterrey*      *June 2010–August 2010*
- Provided extra resources for students at Mexican universities by building a website to map MIT's online material to their courses

## Teaching

**MIT,** EECS Department                                            **Cambridge, MA**
*6.933 Founder's Journey Teaching Assistant*                        *January 2013–May 2014*
- Founded and directed an initiative to help students offset early expenses in evaluating their ideas by awarding monetary grants
- Mentored students and provided feedback on their ideas in order to hone their entrepreneurial skills

**MIT,** Global Startup Labs formerly known as AITI                 **Bangalore, India**
*Technical Assistant*                                              *June 2013–August 2013*
- Taught 32 India university students Ruby on Rails and the fundamentals of web development
- Guided 10 teams as they developed prototypes and pitched to local venture capitalists and accelerators

**MIT,** Physics Department & Experimental Study Group (ESG)        **Cambridge, MA**
*8.01 Classical Mechanics Teaching Assistant*                      *September 2010–December 2010*
- Assisted students during class and office hours by working through problems and answering questions
- Taught math review sessions that went over many difficult math concepts in physics to help students who were struggling

# Leadership

**MIT,** Eta Kapp Nu (HKN) Honor Society for EECS                   **Cambridge, MA**
*President*                                                        *May 2012–May 2014*
- Managed MIT's top academic EECS students to host several large events and services including tutoring and course reviews

**MIT,** Undergraduate Student Advisory Group in EECS (USAGE)       **Cambridge, MA**
*Member & Student Lounge Committee Leader*                          *August 2011–May 2014*
- Led efforts to design and build a new student lounge for EECS undergraduate and masters students
- Worked with EECS students to represent student interests on issues including new degree requirements and research programs

**Ameson Chinese Elite Program**                                   **Beijing, China**
*MIT Student Ambassador*                                           *July 2011*
- Represented MIT in panel discussions about peacekeeping, terrorism, and new energy

**MIT,** 6.470 Web Programming Competition                          **Cambridge, MA**
*Team Leader*                                                      *January 2011*
- Built a resume editor and management system that won Utility, HTML5, and audience choice awards, totaling $2000 in prizes

# Honors

## Fellowships & Scholarships

| | |
|---|---|
| - Accel Innovation Scholar | 2018 |
| - NSF Graduate Research Fellow | 2015 |
| - Stanford Enhancing Diversity in Graduate Education (EDGE) Doctoral Fellow | 2015 |
| - ACM Richard Tapia Scholar | 2015 |
| - MITx Fellow | 2013 |
| - Google Build Opportunities for Leadership & Development (BOLD) Immersion Scholar | 2011 |
| - Quest Scholar | 2010 |
| - MIT Club of Northern New Jersey Scholar | 2010 |

## Awards

| | |
|---|---|
| - Facebook Hardware & Software Systems Research Award | 2018 |
| - Stanford School of Engineering Diversity Recruitment Award | 2016 |
| - MIT Industrial Advisory Council for the Office of Minority Education (IACME) Student Prize | 2015 |

| | |
|---|---|
| o MIT EECS Paul Penfield Student Service Award | 2014 |
| o Google Patent Award | 2012 |

## Professional Memberships

| | |
|---|---|
| o MIT Gordon Engineering Leadership (GEL) Program GEL1 | 2013 |
| o Tau Beta Pi (TBP) National Engineering Honor Society | 2013 |
| o IEEE Eta Kappa Nu (HKN) Honor Society | 2012 |

# Publications

[1] **Cody Coleman**, Daniel Kang, Deepak Narayanan, Luigi Nardi, Tian Zhao, Jian Zhang, Peter Bailis, Kunle Olukotun, Chris Ré, and Matei Zaharia. "Analysis of DAWNBench, a Time-to-Accuracy Machine Learning Performance Benchmark". In: *SIGOPS Oper. Syst. Rev.* 53.1 (July 2019), pp. 14–25. ISSN: 0163-5980. DOI: 10.1145/3352020.3352024. URL: http://doi.acm.org/10.1145/3352020.3352024.

[2] **Cody Coleman**, Christopher Yeh, Stephen Mussmann, Baharan Mirzasoleiman, Peter Bailis, Percy Liang, Jure Leskovec, and Matei Zaharia. "Selection Via Proxy: Efficient Data Selection For Deep Learning". In: *CoRR* abs/1906.11829 (2019). arXiv: 1906.11829. URL: http://arxiv.org/abs/1906.11829.

[3] **Cody Coleman**, Deepak Narayanan, Daniel Kang, Tian Zhao, Jian Zhang, Luigi Nardi, Peter Bailis, Kunle Olukotun, Chris Ré, and Matei Zaharia. "DAWNBench: An End-to-End Deep Learning Benchmark and Competition". In: *ML System Workshops at NIPS*. https://dawn.cs.stanford.edu/benchmark/papers/nips17-dawnbench.pdf. 2017.

[4] **Cody A. Coleman**. "Identifying and Characterizing Subpopulations in Massive Open Online Courses". MA thesis. 77 Massachusetts Ave, Cambridge, MA 02139: Massachusetts Institute of Technology, 2015.

[5] **Cody A. Coleman**, Daniel T. Seaton, and Isaac Chuang. "Probabilistic Use Cases: Discovering Behavioral Patterns for Predicting Certification". In: *Proceedings of the Second ACM conference on Learning@Scale conference*. ACM. Vancouver, Apr. 2015.

[6] Andrew D. Ho, Isaac Chuang, Justin Reich, **Cody A. Coleman**, Jacob Whitehill, Curtis G. Northcutt, Joseph J. Williams, John D. Hansen, Glenn Lopez, and Rebecca Petersen. "HarvardX and MITx: Two Years of Open Online Courses Fall 2012-Summer 2014". In: *Social Science Research Network* (Mar. 2015). http://ssrn.com/abstract=2586847.

[7] Yohsuke Miyamoto, **Cody A. Coleman**, Joseph Williams, Jacob Whitehill, Sergiy Nesterko, and Justin Reich. "Beyond Time-on-Task: The Relationship Between Spaced Study and Certification in MOOCs". In: *Journal of Learning Analytics* 2.2 (2015), pp. 47–69. ISSN: 1929-7750. URL: http://epress.lib.uts.edu.au/journals/index.php/JLA/article/view/4256.

[8] Daniel T. Seaton, **Cody A. Coleman**, Jon P. Daries, and Isaac Chuang. "Enrollment in MITx MOOCs: Are We Educating Educators". In: *Educause Review (February 2015)* (2015). http://er.educause.edu/articles/2015/2/enrollment-in-mitx-moocs-are-we-educating-educators.

[9] Jacob Whitehill, Joseph J. Williams, Glenn Lopez, **Cody A. Coleman**, and Justin Reich. "Beyond Prediction: First Steps Toward Automatic Intervention in MOOC Student Stopout". In: *Proceedings of the 8th International Conference on Educational Data Mining*. International Educational Data Mining Society. Madrid, 2015.