

Cody Austun Coleman

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

☎ +1 (617) 564 0648 • ✉ cody.coleman@cs.stanford.edu • Last Updated: 2019/09/09

Education

Stanford University

Doctor of Philosophy in Computer Science, 4.0/4.0

Supervisor: Matei Zaharia and Peter Bailis

Stanford, CA

September 2016–Present

Massachusetts Institute of Technology (MIT)

Master of Engineering in Electrical Engineering and Computer Science, 5.0/5.0

Supervisor: Isaac Chuang

Cambridge, MA

September 2013–February 2015

Massachusetts Institute of Technology (MIT)

Bachelor of Science in Electrical Engineering and Computer Science, 4.9/5.0

Cambridge, MA

September 2009–June 2013

Experience

Research

Stanford, DAWN Project

Researcher

Stanford, CA

June 2017–Present

- o Founded MLPerf with researchers and engineers from Google, Harvard, and Baidu and gained the support of over 30 organizations
- o Led DAWNbench, an end-to-end deep learning benchmark and competition, to an over a 1000× improvement in ImageNet training time with outside submissions from teams including Google, fast.ai, Intel, and Alibaba

MIT, Office of Digital Learning and MITx

Research Assistant

Cambridge, MA

February 2013–February 2015

- o Investigated teacher enrollment in HarvardX and MITx courses in order to redefine the target audience of MOOCs
- o Distilled tracking log information from the edX platform into informative features about student behavior and performance
- o 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

Research Assistant

Cambridge, MA

November 2013–May 2014

- o Explored the impact of spaced study sessions (inspired by spaced practice phenomenon) in HarvardX courses

Professional

Jump Trading, Vendor Data Group

Junior Data Scientist

Chicago, IL

June 2015–August 2016

- o 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
- o Communicated internally and externally to understand needs, identify opportunities, diagnose problems, and maintain reliability

Davidson College, DavidsonX and DavidsonNext

Educational Technology Consultant

Davidson, NC

March 2015–June 2015

- o Automated data processing for 5 DavidsonX Massive Open Online Courses (MOOCs) and 64 DavidsonNext blended AP courses

Google, Associate Product Manager (APM) Internship

YouTube Analytics Intern

Zurich, Switzerland

June 2012–August 2012

- o Managed a team of 12 to launch estimated time watched and metric comparisons across the world
- o Designed initial draft of playlist analytics for YouTube's curators
- o Collaborated with numerous teams in YouTube to deal with issues concerning publicity, privacy, accessibility and discovery

Google, Building Opportunity in Leader Development (BOLD) Internship

Local Search Quality Intern

Mountain View, CA

June 2011–August 2011

- o Programmed tools for large-scale data manipulation and analysis to expedite and improve spam detection in Google Places
- o Created and administered training documents, videos, exercises, and workshops globally for both R and Google BigQuery

MISTI Mexico, Iniciativa OCW*Web Developer & Team Representative at el Tecnológico de Monterrey*

- o Provided extra resources for students at Mexican universities by building a website to map MIT's online material to their courses

Mexico City, Mexico*June 2010–August 2010***Teaching**.....**MIT, EECS Department***6.933 Founder's Journey Teaching Assistant***Cambridge, MA***January 2013–May 2014*

- o Founded and directed an initiative to help students offset early expenses in evaluating their ideas by awarding monetary grants
- o Mentored students and provided feedback on their ideas in order to hone their entrepreneurial skills

MIT, Global Startup Labs formerly known as AITI*Technical Assistant***Bangalore, India***June 2013–August 2013*

- o Taught 32 India university students Ruby on Rails and the fundamentals of web development
- o Guided 10 teams as they developed prototypes and pitched to local venture capitalists and accelerators

MIT, Physics Department & Experimental Study Group (ESG)*8.01 Classical Mechanics Teaching Assistant***Cambridge, MA***September 2010–December 2010*

- o Assisted students during class and office hours by working through problems and answering questions
- o 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***President***Cambridge, MA***May 2012–May 2014*

- o 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)*Member & Student Lounge Committee Leader***Cambridge, MA***August 2011–May 2014*

- o Led efforts to design and build a new student lounge for EECS undergraduate and masters students
- o Worked with EECS students to represent student interests on issues including new degree requirements and research programs

Ameson Chinese Elite Program*MIT Student Ambassador***Beijing, China***July 2011*

- o Represented MIT in panel discussions about peacekeeping, terrorism, and new energy

MIT, 6.470 Web Programming Competition*Team Leader***Cambridge, MA***January 2011*

- o Built a resume editor and management system that won Utility, HTML5, and audience choice awards, totaling \$2000 in prizes

Honors**Fellowships & Scholarships**.....

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

Awards.....

- o Facebook Hardware & Software Systems Research Award 2018
- o Stanford School of Engineering Diversity Recruitment Award 2016
- o 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. *SIGOPS Oper. Syst. Rev.*, 53(1):14–25, July 2019.
- [2] **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*, 2017. <https://dawn.cs.stanford.edu/benchmark/papers/nips17-dawnbench.pdf>.
- [3] **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. *CoRR*, abs/1906.11829, 2019.
- [4] **Cody A. Coleman**. Identifying and characterizing subpopulations in massive open online courses. Master’s thesis, Massachusetts Institute of Technology, 77 Massachusetts Ave, Cambridge, MA 02139, 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, 4 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. *Social Science Research Network*, 3 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. *Journal of Learning Analytics*, 2(2):47–69, 2015.
- [8] Daniel T. Seaton, **Cody A. Coleman**, Jon P. Daries, and Isaac Chuang. Enrollment in mitx moocs: Are we educating educators. *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, 2015.