

# Cody Austun Coleman

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## Education

### Stanford University

*Doctor of Philosophy in Computer Science*

**Stanford, CA**

*Present*

### Massachusetts Institute of Technology (MIT)

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

Supervisor: Isaac Chuang

**Cambridge, MA**

*February 2015*

### Massachusetts Institute of Technology (MIT)

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

**Cambridge, MA**

*June 2013*

## Experience

### Research

#### MIT, Office of Digital Learning and MITx

*Research Assistant*

**Cambridge, MA**

*February 2013–February 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

*Research Assistant*

**Cambridge, MA**

*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

*Junior Data Scientist*

**Chicago, IL**

*June 2015–August 2016*

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

#### Davidson College, DavidsonX and DavidsonNext

*Educational Technology Consultant*

**Davidson, NC**

*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

*YouTube Analytics Intern*

**Zurich, Switzerland**

*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

*Local Search Quality Intern*

**Mountain View, CA**

*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

*Web Developer & Team Representative at el Tecnológico de Monterrey*

**Mexico City, Mexico**

*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

- 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

Bangalore, India

Technical Assistant

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)

Cambridge, MA

8.01 Classical Mechanics Teaching Assistant

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

## Skills

**Programming Languages:** Python, C, C++, SQL,  $\LaTeX$

**Web:** HTML, CSS, JavaScript, SCSS, CoffeeScript

**Applications:** Vi/Vim, Git, tmux, MySQL

**Operating Systems:** Linux, Redhat, macOS, Windows

## Leadership

MIT, Eta Kappa Nu (HKN) Honor Society for EECS

Cambridge, MA

President

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)

Cambridge, MA

Member

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**

Beijing, China

MIT Student Ambassador

July 2011

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

MIT, 6.470 Web Programming Competition

Cambridge, MA

Team Leader

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 NSF Graduate Research Fellow 2015
- o Stanford EDGE Doctoral Fellow 2015
- o ACM Richard Tapia Scholarship 2015
- o Google BOLD Immersion Scholar 2011
- o Quest Scholar 2010
- o MIT Club of Northern New Jersey Scholar 2010

### Awards

- 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 Tau Beta Pi (TBP) National Engineering Honor Society 2013
- o IEEE Eta Kappa Nu (HKN) Honor Society 2012

## References

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### Isaac Chuang

Professor of Electrical Engineering and Computer Science  
Professor of Physics  
Senior Associate Dean of Digital Learning  
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### Angela Duckworth

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### Sanjay Sarma

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Vice President for Open Learning  
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### Anantha Chandrakasan

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## Conference Activity/Participation

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- MIT Learning International Networks Consortium (LINC) 2016
- Harvard-MIT Online Learning Summit 2015
- American Educational Research Association (AERA) Annual Meeting 2015
- ACM Conference on Learning at Scale 2015
- ACM Richard Tapia Celebration of Diversity in Computing Conference 2015
- MIT Learning International Networks Consortium (LINC) 2013

## Publications

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- [1] **Cody A. Coleman**. Identifying and characterizing subpopulations in massive open online courses. Master's thesis, 77 Massachusetts Ave, Cambridge, MA 02139, 2015.
- [2] **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.
- [3] 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>.
- [4] 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.
- [5] Daniel T Seaton, **Cody A. Coleman**, and Jon P. Daries. MIT institutional research report: Teacher enrollment in MITx open online courses, 1 2015. [http://web.mit.edu/ir/mitx/MOOC\\_teachers\\_supp\\_material.pdf](http://web.mit.edu/ir/mitx/MOOC_teachers_supp_material.pdf).
- [6] Daniel T. Seaton, **Cody A. Coleman**, Jon P. Daries, and Isaac Chuang. Enrollment in mitx moocs: Are we educating educators. *Educause Review (February 2015)*. <http://er.educause.edu/articles/2015/2/enrollment-in-mitx-moocs-are-we-educating-educators>.
- [7] 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.