

# 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 & Student Lounge Committee Leader

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.