

Justin Richards

Full-stack Web Developer, Data Scientist, and Educator

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EDUCATION

May 2014

The Graduate Center at the City University of New York

Master of Arts in Computational Linguistics

- **Areas of Focus:** speech, semantic role labeling, and machine learning
- **Natural language Processing Seminar:** student chair

Publications (co-author)

- *Let Me Finish: Automatic Conflict Detection Using Speaker Overlap.*
- *Using Word-Burst Analysis to Rescore Keyword Search in Low Resource Languages*
- *Strategies for Rescoring Keyword Search Results Using Word-Burst and Acoustic Features*

May 2007

University of Florida: Bachelors of Science

- **B.S. in Journalism, minor in English (GPA 3.5)**

EXPERIENCE

June 2015-

THE IRON YARD - Houston, TX

June 2017

Designed and implemented a curriculum for web development with JavaScript.

Front-end Engineering Instructor

- Taught a 12-week, full-time immersive course in client- and server-side web application development for enrollees with no prior experience.
- Designed long-term pedagogical strategies as well as daily activities and assignments; improve and expanded the course material with every cohort.
- Project-managed teams of up to 19 new developers on hackathons and full-stack application development.
- Built a full-stack web development framework for students.
- Placed ~80% of graduating students in high-paying software development jobs.

April 2013-

FREELANCE DATA SCIENTIST- New York, NY

June 2014

Clients included an academic department, a startup, and a financial firm.

- Created programs to achieve abstract goals presented by non-technical clients, determining high-level strategies, applicable tools, and most effective code logic.
- Developed an effective model (~55% accuracy) for predicting stock returns by performing NLP analysis on the language of CEOs for a risk management firm.
- Delivered a user-friendly and stable tool for a non-technical end user that automates the harvesting of data stores on over 75 websites.

*Feb. 2013-
Aug. 2014*

IARPA BABEL OPEN KWS PROJECT- New York, NY

U.S. Department of Defense project to generate high-performing keyword search (KWS) system for speech data in low-resource languages

Researcher/Programmer

- Wrote software that interacted with every level of a multi-stage KWS system produced by a global team spanning several universities and corporate labs.
- Improved on team's best KWS result by designing a feature set, ML classification scheme, and parameter-optimization routine for search-result rescoring.

*Nov. 2012-
Oct. 2014*

SPEECH LAB AT QUEENS COLLEGE - New York, NY

Research group focused on computational approaches to decoding speech

Research Assistant

- Collaborated with other researchers on large-scale projects relating to speech and natural language processing
- Published work in response to the Interspeech ComParE conflict recognition challenge with a feature reduction method that improved on baseline results.

*Aug. 2009 -
May 2012*

LEGAL OUTREACH - New York, NY

College pipeline program for students from underserved communities.

Writing Program Instructor, Afterschool Program Director

- Developed a year's worth of curricular materials in grammar and essay writing
- Fully restructured the afterschool program, effecting the first measurable improvement in grade average in the organization's history.
- Presented statistical reports on attendance and grades to Legal Outreach's funders.
- Managed a team of five instructors, each responsible for a class of 12 - 15 students.

SKILLS & LANGUAGES

Tech: JavaScript (React, Node); HTML/CSS/SCSS; Python; git; UNIX environments

Languages: Proficient: Spanish, German; Competent: French, Chinese