

# Justin Richards

*Full-stack Web Developer, Data Scientist, and Educator*

✉ 1632 Bonnie Brae St.  
1967  
Houston, TX 11222  
richards.justind@gmail.com

☎ +1 727 686

## 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-  
present**

**THE IRON YARD – Houston, TX**

Designed and implemented a curriculum for web development with JavaScript.

*Front-end Engineering Instructor*

- Teach a 12-week, full-time immersive course in client- and server-side web application development for enrollees with no prior experience.
- Design long-term pedagogical strategies as well as daily activities and assignments; improve and expanded the course material with every cohort.
- Engage with the local tech community (hackathons, free crash courses, etc.) to develop connections for course marketing and student placement.
- Built a full-stack web development framework for students.
- Place ~80% of graduating students in high-paying software development jobs.

**April 2013-  
June 2014**

**FREELANCE DATA SCIENTIST– New York, NY**

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.

#### **TEACHING & LANGUAGE EXPERIENCE**

**Aug. 2009 –  
June 2014**      **PRIVATE TUTOR – New York, NY**  
Work for tutoring agencies and independently acquired clients

*Private Tutor.*

- Teach programming in Python, Java and other languages to children and adults, providing useful metaphors and challenging exercises to unlock key concepts.
- Prepare clients for language, math and science subjects as well as standardized tests on the high school, undergraduate and graduate levels.

**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 and Node.js); HTML/CSS/SCSS; Python (ML and NLP tooling such as NumPy, SciPy, NLTK & scikit-learn); UNIX environments and shell scripting

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