

# Elliot P. Schumacher

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## EDUCATION

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### Johns Hopkins University

August 2017 - Present

*Ph.D. in Computer Science*

*Center for Language and Speech Processing*

**Advisor:** Dr. Mark Dredze

**Research area:** Natural Language Processing for Medical Data.

### Carnegie Mellon University

August 2015-August 2017

*Master of Science in Language Technologies*

*Language Technologies Institute*

**Advisor:** Dr. Maxine Eskenazi

**Research area:** Natural Language Processing for Educational domain.

**Selected Courses:** Machine Learning, Algorithms for NLP, Machine Translation, Language and Statistics, Deep Learning (all PhD. level courses)

**GPA:** 3.73/4.00

### Ohio State University

May 2014

*Bachelors of Science in Computer & Information Science, and Linguistics*

*with Honors, Cum Laude*

**Selected Courses:** Computational Linguistics, Speech and Language Processing, Advanced Artificial Intelligence, Computer Vision, Machine Learning

**Overall GPA:** 3.64/4.00, **Major GPA:** 3.72/4.00

## PUBLICATIONS

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### EMNLP 2016

November 2016

- E. Schumacher, M. Eskenazi, G. Frishkoff, K. Collins-Thompson. Predicting the Relative Difficulty of Single Sentences With and Without Surrounding Context. Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing (EMNLP 2016). ([Link](#)).

## TECHNICAL REPORTS AND PRESS COVERAGE

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### A Readability Analysis of Campaign Speeches from the 2016 US Presidential Campaign

March 2016

E. Schumacher, M. Eskenazi. ([Arxiv Link](#)).

- **CMU Press Release:** *Most Presidential Candidates Speak at Grade 6 - 8 Level*
- **Selected Press Coverage**

**Huffington Post:** *Trumps Speeches Are At A Middle-School Reading Level, Study Says.*

**Washington Post:** *Trumps grammar in speeches just below 6th grade level, study finds.*

**Pittsburgh Tribune-Review:** *Speeches dip below 6th-grade level, study says.*

## RESEARCH EXPERIENCE

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### Carnegie Mellon University

September 2015 - August 2017

*Research Assistant*

*Pittsburgh, PA*

- Worked on the DSCoVAR project, a Department of Education grant to build a Vocabulary Tutoring System.

- Developed a method of ranking the reading difficulty of a sentence for first language learners, by running a crowdsourcing task and modeling the data to find important features (see EMNLP 2016 paper).
- Built a pipeline that finds sentences with selected vocabulary words, and annotates them for difficulty and other information.

## WORK EXPERIENCE

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### State Teachers Retirement System of Ohio

January 2013 - August 2015

*Student Developer, promoted to Developer*

*Columbus, Ohio*

- Developed internal applications in Java and C#.
- Designed and implemented a web application for internal forms.

### Ohio State University Wexner Medical Center

May 2011 - January 2013

*Student Intern*

*Columbus, Ohio*

- Provided technical support within Ohio State's Hospital system.

### Ohio State University College of Medicine

Sept 2009 - August 2011

*Mobile Services Student*

*Columbus, Ohio*

- Provided technical support for students in the College of Medicine

## AWARDS AND ACHIEVEMENTS

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### Graduate Research Fellowship

Recipient

- Selected for a research fellowship, which provides full funding for tuition, stipend, and other fees.
- Scholarship value: USD 75,000 per year, renewable for duration of degree.

### Maximus Scholarship Recipient

Recipient

- Received a yearly scholarship, which partially covered tuition for 4 years.

## TECHNICAL STRENGTHS

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### Computer Languages

Python, Java, C#. Some experience in C, MATLAB

### Toolkits

sklearn, nltk

### Databases

MySQL, Oracle, Microsoft SQL