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John P. Lalor

Research Interests

- Natural Language Processing, Machine Learning, Health Informatics, Computer Science Education

Education

2015- **Ph.D. Computer Science**, *University of Massachusetts*, Amherst, MA.
- Advisor: Hong Yu

2013-2015 **M.S. Computer Science**, *DePaul University*, Chicago, IL.
- Graduated with Distinction

2007-2011 **B.B.A. IT Management**, *University of Notre Dame*, South Bend, IN.
- Minor: Irish Language and Literature
- Graduated Cum Laude

Professional Experience

Summer 2018 **Applied Scientist Intern**, *Amazon Alexa*, Cambridge, MA.
- Supervisor: Imre Kiss

2015- **Research Assistant**, *BioNLP Group*, Amherst, MA.
- Supervisor: Hong Yu

Summer 2017 **Applied Scientist Intern**, *Amazon Alexa*, Cambridge, MA.
- Supervisors: Imre Kiss and Francois Mairesse

Summer 2016 **Graduate Intern**, *ESPN Advanced Technology Group*, Bristol, CT.
- Supervisor: Zvi Topol

Fall 2015 **Teaching Assistant**, *Introduction to Computer Science, Amherst College*, Amherst, MA.
- Professor: Crystal Valentine

2013-2015 **Software Developer**, *Eze Software Group*, Chicago, IL.

2011-2013 **Advisory Sr. Associate**, *KPMG*, Philadelphia, PA, Chicago, IL.

Manuscripts Under Review

- **J.P. Lalor**, B. Woolf, H. Yu. Improving EHR Note Comprehension with NoteAid: A Randomized Trial of EHR Note Comprehension Interventions with Crowdsourced Workers. *JMIR Preprints.* 27/04/2018:10793 DOI: 10.2196/preprints.10793
- **J.P. Lalor**, R. Just. CCC-Rank: Ranking Pull Requests in Open Source Software.
- **J.P. Lalor**, H. Wu, H. Yu. Soft Label Memorization-Generalization for Natural Language Inference.
- **J.P. Lalor**, H. Wu, T. Munkhdalai, H. Yu. Understanding Deep Learning Performance through an Examination of Test Set Difficulty: A Psychometric Case Study.

Publications

- **J.P. Lalor**, H. Wu, L. Chen, K. Mazor, H. Yu. ComprehENotes, an Instrument for Assessing Patient Electronic Health Record Note Reading Comprehension: Development and Validation. *J Med Internet Res* 2018;20(4):e139. doi:10.2196/jmir.9380

- T. Munkhdalai, **J.P. Lalor**, H. Yu. Citation Analysis with Neural Attention Models. *LOUHI 2016 : The Seventh International Workshop on Health Text Mining and Information Analysis*, Austin, Texas, USA, November 2016.
- **J.P. Lalor**, H. Wu, H. Yu. Building an Evaluation Scale using Item Response Theory. *EMNLP 2016: Conference on Empirical Methods in Natural Language Processing*, Austin, Texas, USA, November 2016.
- C. Miller, A. Settle, **J.P. Lalor**. Learning Object-Oriented Programming in Python: Towards an Inventory of Difficulties and Testing Pitfalls. *SIGITE 2015: The Special Interest Group for Information Technology Education Conference*, Chicago, Illinois, October 2015
- A. Settle, **J.P. Lalor**, T. Steinbach. Evaluating a Linked-Courses Learning Community for Development Majors. *SIGITE 2015: The Special Interest Group for Information Technology Education Conference*, Chicago, Illinois, October 2015
- A. Settle, **J.P. Lalor**, T. Steinbach. A Computer Science Linked-Courses Learning Community. *ITiCSE 2015: The 20th Annual Conference on Innovation and Technology in Computer Science Education*. Vilnius, Lithuania, July 2015
- A. Settle, **J.P. Lalor**, T. Steinbach. Reconsidering the Impact of CS1 on Novice Attitudes. *SIGCSE 2015: The ACM Special Interest Group on Computer Science Education*. Kansas City, Missouri, March 2015

Posters and Abstracts

- **J.P. Lalor**, H. Wu, H. Yu. Modeling Difficulty to Understand Deep Learning Performance. *Northern Lights Deep Learning Workshop (NLDL)*, 2018.
- **J.P. Lalor**, H. Wu, H. Yu. CIFT: Crowd-Informed Fine-Tuning to Improve Machine Learning Ability. *Human Computation and Crowdsourcing (HCOMP)* Works-in-Progress, 2017.
- **J.P. Lalor**, H. Wu, L. Chen, K. Mazor, H. Yu. Generating a Test of Electronic Health Record Narrative Comprehension with Item Response Theory. *American Medical Informatics Association (AMIA) Annual Symposium* Podium Abstract, 2017.

Invited Talks

- Building Better Evaluations using Item Response Theory. *University of Notre Dame Natural Language Processing Group,* 09/29/2017.
- Building Evaluation Scales for NLP using Item Response Theory. *UMass CICS Machine Learning and Friends Lunch series,* 12/08/2016.

Awards

- Recipient: UMass CICS Travel Grant, January 2018
- Recipient: DePaul University Graduate Assistantship
- Member: DePaul UPE Honor Society
- Dean's List 4 semesters at Notre Dame

Service

- Organizer, UMass CICS Machine Learning and Friends Lunch. 2018-Present
- Mentor, UMass CICS Industry Mentor Program. Spring 2018
- Reviewer, American Journal of Preventative Medicine (AJPM). 2018-Present
- Reviewer, American Medical Informatics Association Annual Symposium (AMIA). 2018-Present
- Reviewer, Journal of Medical Internet Research (JMIR). 2016-Present
- DePaul University Graduate Ambassador for prospective students
- DePaul Tutor for undergraduate students as part of my Graduate Assistantship