David Wadden

Curriculum Vitae

Paul G. Allen Center for Computer Science & Engineering
University of Washington
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Research Interests

I'm interested in building systems to extract, synthesize and verify findings reported in scientific research literature – especially in settings that require incorporating and reasoning over background knowledge.

Education

since 2016 **PhD Computer Science**, *University of Washington*, Seattle.
Advised by Hannaneh Hajishirzi.

2016–2019 **MS Computer Science**, *University of Washington*, Seattle.

2006–2010 **BA Physics**, *Amherst College*, Amherst.
With Distinction
Phi Beta Kappa

Publications

Conference publications

2021 **David Wadden**, Tal August, Qisheng Li, Tim Althoff. The Effect of Moderation on Online Mental Health Conversations. *ICWSM 2021*.

2020 **David Wadden**, Shanchuan Lin, Kyle Lo, Lucy Lu Wang, Madeleine van Zuylen, Arman Cohan, Hannaneh Hajishirzi. Fact or Fiction: Verifying Scientific Claims. *EMNLP 2020*.

2019 **David Wadden**, Ulme Wennberg, Yi Luan, Hannaneh Hajishirzi. Entity, Relation, and Event Extraction with Contextualized Span Representations. *EMNLP 2019*.

2019 Yi Luan, **David Wadden**, Luheng He, Hannaneh Hajishirzi, Mari Ostendorf. A General Framework for Information Extraction using Dynamic Span Graphs. *NAACL 2019*.

Preprints

2020 Aida Amini, Tom Hope, **David Wadden**, Madeleine van Zuylen, Eric Horvitz, Roy Schwartz, Hannaneh Hajishirzi. Extracting a Knowledge Base of Mechanisms from COVID-19 Papers.

Journal papers

2019 The ALS Stratification Consortium. Stratification of amyotrophic lateral sclerosis patients: a crowdsourcing approach. *Scientific Reports* **9**, Article number: 690 (2019).

2018 Oana M Enache, David L Lahr, Ted E Natoli, Lev Litichevskiy, **David Wadden**, Corey Flynn, Joshua Z Gould, Jacob K Asiedu, Rajiv Narayan, Aravind Subramanian. The GCTx format and cmap{Py, R, M, J } packages: resources for the optimized storage and integrated traversal of dense matrices of annotated dense matrices. *Bioinformatics*, bty784.

2017 Aravind Subramanian et al. (**David Wadden** author #17 of 52). A Next Generation Connectivity Map: L1000 Platform And The First 1,000,000 Profiles. *Cell* 171(6):1437-1452.e17, 2017.

2017 Ian Smith, Peyton Greenside, Ted Natoli, David L. Lahr, **David Wadden**, Itay Tirosh, Rajiv Narayan, David E. Root, Todd R. Golub, Aravind Subramanian, John G. Doench. Evaluation of RNAi and CRISPR technologies by large-scale gene expression profiling in the Connectivity Map. *PLoS Biol* 15(11):e2003213.

Research Experience

Since Fall '18 **Graduate Research Assistant**, University of Washington, Seattle, WA.
- **Supervisor**: Professor Hannaneh Hajishirzi
- **Research focus**: NLP methods for information extraction and claim verification.

Fall-Spr '19-20 **Research Intern**, Allen Institute for AI, Seattle, WA.
- **Supervisors**: Kyle Lo
- **Research focus**: Dataset creation and modeling for scientific fact-checking.

Win-Spr '18 **Graduate Research Assistant**, University of Washington, Seattle, WA.
- **Supervisor**: Professor William Noble
- **Research focus**: Recurrent neural network models for peptide retention time prediction.

Spr-Sum'17 **Modeling Intern**, Allen Institute for Cell Science, Seattle, WA.
- **Supervisor**: Molly Maleckar, PhD
- **Research focus**: Time series modeling of fluorescence microscopy imaging.

Spr'14-Spr'15 **Research Assistant**, MIT Probabilistic Computing Project, Cambridge, MA.
- **PI**: Vikash Mansinghka, PhD
- **Research focus**: The Venture system for probabilistic programming.

Spr'11-Spr'14 **Associate Computational Biologist**, The Broad Institute of MIT and Harvard, Cambridge, MA.
- **Supervisor**: Aravind Subramanian, PhD
- **Research focus**: Computational tools for analyzing gene expression data.

Industry Experience

Sum'18 **Software Engineering Intern**, Google, Kirkland, WA.
- **Supervisor**: Evgeny Skvortsov, PhD
- **Internship focus**: Designed and implemented a machine learning approach to forecast and report ad reach into affinity (i.e. interest) categories. Trained machine learning models using TensorFlow.

Awards

2010 William Warren Stifler Prize in Physics, Amherst College

2007 Bassett Physics Prize, Amherst College

Teaching

Wi'17 UW CSE 446: Machine Learning (Undergraduate)

Fall'16, '17 UW CSE 427: Computational Biology (Undergraduate)

Hobbies and interests

2014-2015 **Emerging Artist**, Boston Lyric Opera, Boston, MA.
Spent a year working as an opera singer.