DAVID MUELLER

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RESEARCH INTERESTS

- Multi-Task Optimization and Inter-Task Conflict
- The Dynamics of SGD and Generalization in Neural Networks
- Empirically Analyzing Neural Network Loss Surfaces
- Applying the above to Multilingual Natural Language Processing

EDUCATION

Johns Hopkins University — **Sept 2018 - present**
PhD, Computer Science — *Baltimore, MD*
Advisors: Mark Dredze and Nicholas Andrews

Johns Hopkins University — **Sept 2018 - Fall 2021**
Master of Science in Engineering, Computer Science — *Baltimore, MD*

University of Texas — **Sept 2012 - May 2016**
Bachelor of Science, Computer Science — *Austin, TX*

RESEARCH EXPERIENCE

Research Assistant — **2018-Present**
Advised by Mark Dredze and Nicholas Andrews — *Johns Hopkins University*

Student Researcher — **Summer 2019**
SCALE 2019 Workshop: https://hltcoe.jhu.edu/research/scale/scale-2019/ — *HLTCOE, Johns Hopkins University*

Undergraduate Researcher — **2017-2018**
Advised by Greg Durrett — *University of Texas at Austin*

PUBLICATIONS

1. The Importance of Temperature in Multi-Task Learning
   David Mueller, Mark Dredze, Nicholas Andrews
   OPT 2022: Optimization for Machine Learning Workshop @ NeurIPS 2022

2. Do Multi-Task Learners Suffer from Task-Conflict?
   David Mueller, Nicholas Andrews, Mark Dredze
   Findings of the 2022 Conference on Empirical Methods in Natural Language Processing

3. Ensemble Distillation for Structured Prediction
   Steven Reich, **David Mueller**, Nicholas Andrews
   Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing
   https://www.aclweb.org/anthology/2020.emnlp-main.450/

4. Sources of Transfer in Multilingual Named Entity Recognition
   David Mueller, Nicholas Andrews, Mark Dredze
   Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, 2020
   https://www.aclweb.org/anthology/2020.acl-main.720/

5. Effective Use of Context in Noisy Entity Linking
   David Mueller, Greg Durrett
   Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing
   https://www.aclweb.org/anthology/D18-1126/

TEACHING EXPERIENCE

- 2019 - Teaching Assistant for Machine Learning at Johns Hopkins University *(CS 601.475, Fall Semester)*

SERVICE

Community Service

- 2021, 2022, 2023 CLSP Graduate Admissions Committee, Johns Hopkins University
- 2020 CLSP Student Recruitment Committee, Johns Hopkins University

Reviewing

- ARR 2022
- NeurIPS 2022
- ICML 2020*, 2022
- ICLR 2020*, 2021*, 2022
- AISTATS 2022, 2023
- EMNLP 2020*, 2021, 2022
- ACL-IJCNLP 2020*, 2021, 2022

*Secondary Reviewer

OTHER SKILLS

Software Python, Tensorflow, PyTorch, Bash, LaTeX
Languages English: professional proficiency. Spanish: conversational.