Elias Stengel-Eskin

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Education

Johns Hopkins University — Baltimore, USA
Ph.D. in Computer Science, Advisor: Benjamin Van Durme — 2018–Current

- supported by NSF Graduate Research Fellowship

Johns Hopkins University — Baltimore, USA
MSE in Computer Science, Advisor: Benjamin Van Durme — 2018–2021

McGill University — Montreal, Quebec
Bachelor of Arts and Sciences in Cognitive Science — 2014–2018

- Minor: Linguistics
- First Class Honours (GPA: 3.85/4.00)
- Honours thesis: "Variational Bayesian Inference for Unsupervised Lexicon Discovery", Advisor: Timothy O'Donnell

Experience

Microsoft Research — Montreal
PhD Research Intern — March 2022-March 2023

Microsoft Research - Semantic Machines — Remote
PhD Research Intern — Summer 2021

Montreal Computational and Quantitative Linguistics Lab — Montreal, Canada
Research Assistant — 2016-2018

Publications (peer-reviewed)

[1] **E. Stengel-Eskin** and B. Van Durme, "The curious case of control", *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, 2022.

[2] **E. Stengel-Eskin**, E. A. Platanios, A. Pauls, S. Thomson, H. Fang, B. Van Durme, J. Eisner, and Y. Su, "When more data hurts: A troubling quirk in developing broad-coverage natural language understanding systems", *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, 2022.

[3] C. Zhang, B. Van Durme, Z. Li, and **E. Stengel-Eskin**, "Visual commonsense in pretrained unimodal and multimodal models", in *Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long and Short Papers)*, Seattle, Washington: Association for Computational Linguistics, Jul. 2022.

[4] **E. Stengel-Eskin**, A. Hundt, Z. He, A. Murali, N. Gopalan, M. Gombolay, and G. D. Hager, "Guiding multi-step rearrangement tasks with natural language instructions", in *5th Annual Conference on Robot Learning*, 2021.

[5] Z. Li, **E. Stengel-Eskin**, Y. Zhang, C. Xie, Q. Tran, B. Van Durme, and A. Yuille, "Calibrating concepts and operations: Towards symbolic reasoning on real images", in *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, Oct. 2021.

[6] **E. Stengel-Eskin**, J. Guallar-Blasco, and B. Van Durme, "Human-model divergence in the handling of vagueness", in *Proceedings of the 1st Workshop on Understanding Implicit and Underspecified Language*, Online: Association for Computational Linguistics, Aug. 2021, pp. 43–57.

[7] **E. Stengel-Eskin**, K. Murray, S. Zhang, A. S. White, and B. Van Durme, "Joint universal syntactic and semantic parsing", *Transactions of the Association for Computational Linguistics*, 2021.

[8] **E. Stengel-Eskin**, J. Guallar-Blasco, and B. Van Durme, "Exploring human-model divergence through vagueness", *Proceedings of the Society for Computation in Linguistics*, Feb. 2021, ***Abstract**.

[9] R. Culkin, J. E. Hu, **E. Stengel-Eskin**, G. Qin, and B. V. Durme, "Iterative Paraphrastic Augmentation with Discriminative Span Alignment", *Transactions of the Association for Computational Linguistics*, vol. 9, pp. 494–509, May 2021.

[10] **E. Stengel-Eskin**, A. S. White, S. Zhang, and B. Van Durme, "Universal decompositional semantic parsing", in *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, 2020, pp. 8427–8439.

[11] A. S. White, **E. Stengel-Eskin**, S. Vashishtha, V. S. Govindarajan, D. A. Reisinger, T. Vieira, K. Sakaguchi, S. Zhang, F. Ferraro, R. Rudinger, *et al.*, "The universal decompositional semantics dataset and decomp toolkit", in *Proceedings of The 12th Language Resources and Evaluation Conference*, 2020, pp. 5698–5707.

[12] **E. Stengel-Eskin**, T.-R. Su, M. Post, and B. Van Durme, "A discriminative neural model for cross-lingual word alignment", in *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP)*, 2019, pp. 909–919.

[13] M. McAuliffe, **E. Stengel-Eskin**, M. Socolof, and M. Sonderegger, "Polyglot and speech corpus tools: A system for representing, integrating, and querying speech corpora.", in *INTERSPEECH*, 2017, pp. 3887–3891.

Publications (other)

1. **E. Stengel-Eskin**, B. Van Durme, "The Curious Case of Control", https://arxiv.org/abs/2205.12113
2. S. Vaidya, **E. Stengel-Eskin**, J. Sedoc, "Automatic Evaluation of Chit-chat via Semantic Parsing", *Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL 2022)* ***Abstract**
3. Y. Chen, S. Ebner, T. Chen, P. Xia, **E. Stengel-Eskin**, T. Su, J. E. Hu, N. Holzenberger, R. Culkin, C. Harman, M. Thomas, T. Lippincott, A. S. White, K. Rawlins, B. Van Durme, "NIST TAC SM-KBP 2019 System Description: JHU/UR Framework", 2019
4. **E. Stengel-Eskin**, "Variational Bayesian Inference for Unsupervised Lexicon Discovery", 2017, **Undergraduate Honours Thesis**

Invited Talks

- **Joint Universal Syntatic and Semantic Parsing** April 1st, 2022
  Cornell University – Workshop on Meaning in Language

Skills

- **Programming (expert):** Python
- **Programming (proficient):** Bash, Java, Javascript, R
- **Libraries/Frameworks:** PyTorch, AllenNLP, Transformers, NLTK, numpy, MechanicalTurk, networkx, MXNet, React

Languages

- **Native:** English, German
- **Fluent:** French
- **Other:** Latin (reading/translation), Spanish (intermediate)

Teaching

- **Teaching Assistant** at Johns Hopkins University — Fall 2019
  Artificial Intelligence (EN.601.464/664)

Mentoring

- Jimena Guallar-Blasco — Summer 2020-Present
  BS expected 2024
- Zhuohong (Zooey) He — Winter 2021-Spring 2021
  MSE, Spring 2021 (Current: Intuitive)
- Chenyu (Heidi) Zhang — Fall 2021-Present
  BS 2022, (Current: MS at Stanford)
- Shalaka Vaidya — Fall 2022-Present
  MS (NYU) 2023
- Yi Zhou — Winter 2022-Present
  MS 2022

Fellowships and Awards

- NSF Graduate Research Fellowship — 2018–Current
- First Class Honours in Cognitive Science — 2018
- Dean's Honor List (top 10% of faculty) — 2014–2015, 2016–2018
- Arts Undergraduate Research Internship Award ($4000) — 2016

Graduate Courses

Natural Language Processing, Neural Networks for NLP, Deep Learning, Applied Machine Learning, Computational Linguistics, Causal Inference, Vision as Bayesian Inference, Parallel Programming, Software Testing and Debugging, Deep Learning for Automated Discourse, Nonlinear Optimization, Human-Computer Interaction

Service

- **Primary Reviewer:** ACL (2021, 2022), NAACL 2022
- **Secondary Reviewer:** NeurIPS 2020, ACL 2020, NAACL 2019, TACL
- **Program Committee**: Unimplicit 2022