ORION WELLER

Provo Utah, 84604

http://orionweller.github.io ⋄ wellerorion@gmail.com

EDUCATION

Brigham Young University, Provo   *Sept 2017 - April 2021*
Bachelor of Science   GPA: 4.0/4.0
Majors: Computer Science and Statistics   GRE: 170Q 166V 5.5W
Minor: Mathematics
Selected Courses: Natural Language Processing (graduate), Information Retrieval (graduate), Data Science Capstone, Machine Learning, Deep Learning, Computer Vision, Ethics in CS

AWARDS

- CRA Outstanding Undergraduate Researcher Award, 2021
- Goldwater Scholarship, 2020
- BYU Scholarships: Wessel/Marshall Memorial (2019), Juanita Miller Nelson (2018)
- BYU Dean's List (all semesters)

PUBLICATIONS

[1] **Orion Weller**, Nicholas Lourie, Matt Gardner, Matthew Peters, "Learning from task descriptions," in *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing*, Nov. 2020.

[2] **Orion Weller**, Jordan Hildebrandt, Ilya Reznik, Christopher Challis, E. Shannon Tass, Quinn Snell, Kevin Seppi, "You don't have time to read this: An exploration of document level reading time prediction," in *Proceedings of the 2020 Conference of the Association of Computational Linguistics*, Jul. 2020.

[3] **Orion Weller**, Nancy Fulda, Kevin Seppi, "Can humor prediction datasets be used for humor generation? humorous headline generation via style transfer," *Proceedings of the Second Workshop on Figurative Language Processing @ ACL*, Jul. 2020.

[4] **Orion Weller**, Luke Sagers, Carl Hanson, Quinn Snell, Michael Barnes, Shannon Tass, "Predicting mental health and suicidal ideation among adolescents using the risk and protective factor framework (abstract only)," *Society for Prevention Research Conference*, Jun. 2020.

[5] **Orion Weller**, Kevin Seppi, "The rjokes dataset: A large scale humor collection," in *Proceedings of the 2020 Conference on Language Resources and Evaluation*, Mar. 2020.

[6] **Orion Weller**, Kevin Seppi, "Humor detection: A transformer gets the last laugh," in *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing*, Nov. 2019.

RESEARCH EXPERIENCE

Apple AI/ML Research   June 2020 - Sept 2020
- Researched machine translation, developing more efficient methods. Mentor: Matthias Sperber.
- Developed an end-to-end speech translation model that is comparable to standard cascading approaches but has half the number of parameters, designed to reduce inference costs. Work accepted for presentation at WeCNLP'20 and is under review at EACL'21.

Allen Institute for Artificial Intelligence   Jan 2020 - June 2020
- Worked with the AllenNLP team to research transfer learning, generalization, and robustness for question answering. Mentors: Matt Gardner and Sameer Singh.
- Developed a framework to push models towards general language understanding, by learning to solve tasks from their description instead of by examples. Created a benchmark dataset to instantiate this framework. Work published at ENNLP'20 [1].

Applied Machine Learning Lab   Dec 2018 - Dec 2019; Sept 2020 - Present
- Researched natural language understanding, meta-learning, and language generation. Advisors: Kevin Seppi and Nancy Fulda.
- Researched computational humor, gathering a dataset of more than half a million jokes. Developed models to identify and understand humor, showing improved results via transfer learning. Work published at EMNLP'19 [6] and LREC'20 [5].
- Performed initial research into generating jokes automatically, showing jokes that were rated by crowdsourcers as equal to human-created jokes in a blind experiment. Work published at the FigLang@ACL workshop [3].

Computational Health Lab   Sept 2018 - Dec 2019
- Studied psychological predictors of suicidal ideation. Advisors: Quinn Snell and Shannon Tass.
- Improved early classification of at-risk individuals. Work presented at the Society of Prevention Research Conference [4] and to the Utah State Prevention Department.

Capstone Project with Adobe   Sept 2018 - Apr 2019
- Researched NLP modeling of humans (psycholinguistics). Advisors: Ilya Reznik and Chris Challis.
- Developed a novel study to analyze reading time and model human behavior. Used this to predict human reading time of document-sized text. Work published at ACL'20 [2].

ENGINEERING EXPERIENCE

Qualtrics   Apr 2019 - Aug 2019
- Responsible for prototyping a new system for handling edits on the Data Pipeline team, managing data ingestion, flow, and storage. Used RabbitMQ, Galera, and MongoDB.

Digi International   Oct 2017 - Jan 2019
- Worked on building firmware for wireless networking modules on the Zigbee standard. Improved and standardized the way our radio modules sample I/O on the 802.15.4 protocol.

SKILLS

Languages	English (native), Portuguese (intermediate), French (basic)
Programming Languages	Python, C++, R, Javascript, Golang, Java, SQL
Frameworks & Tools	PyTorch, Linux, Mechanical Turk, Django, Vue, NumPy

ACADEMIC SERVICE

Reviewer
Reviewed for the 2020 Workshop on Meta-Learning at NeurIPS.

ACL 2020 Group Mentoring Moderator
Helped manage and set up group mentoring sessions.