Eve Fleisig

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Education

University of California, Berkeley 2021-present
Incoming PhD student in Computer Science, advised by Dan Klein and Rediet Abebe

Princeton University Class of 2021
Bachelor of Science in Engineering in Computer Science (summa cum laude), minor in Linguistics GPA: 3.96

- Graduate courses: Deep Learning for Natural Language Processing, Limits to Prediction
- Machine Translation, Graph Theory, Theory of Algorithms, Theory of Computation, Accelerated Honors Analysis, Syntax
- Mathematics: Linear algebra, multivariable calculus, real analysis
- Languages: Fluent in Spanish (bilingual), highly proficient in French, proficient in Portuguese

Research

Adversarial Learning for Bias Mitigation in Machine Translation 2020-2021

- Developed an adversarial neural network to mitigate machine translation gender bias in Google's T5 model
- In preparation for publication; preprint available upon request
- Undergraduate thesis advisor: Prof. Christiane Fellbaum

Junior Independent Research in Deep Learning for Natural Language Processing 2019-2021

- Cognate identification through transfer learning from a character-level convolutional neural network 2020
- Automatically identifying semantic shift using unsupervised learning 2019
- Advisor: Prof. Christiane Fellbaum

Bilingual Lexical Access and Cognate Idiom Comprehension 2020

- Investigated the effects of figurative language transfer on bilingual lexical processing
- Fleisig, Eve. "Bilingual Lexical Access and Cognate Idiom Comprehension." In *Proceedings of the Workshop on Cognitive Aspects of the Lexicon* (CogALex-VI, a COLING-2020 workshop). 2020. URL: aclweb.org/anthology/2020.cogalex-1.12/

Improving Reinforcement Learning Rewards with Sentiment Analysis 2020-2021

- Optimized reinforcement learning rewards for text-based games with BERT-based sentiment analysis, tackling the problem of sparse rewards and potentially permitting reinforcement learning without rewards
- Co-first authored with Ameet Deshpande: arxiv.org/abs/2010.02316

Research Assistant, National Institute of Standards and Technology (NIST) 2015-2019

- Created VEMOS, a Python user interface to assess fairness and reliability of computer vision models
- Allows forensic researchers to analyze aggregate performance and outliers; invited by NIST to present a talk on VEMOS
- Fleisig, Eve and Gunay Dogan. "VEMOS: A Visual Explorer for Similarity Metrics on Complex Data Sets." NIST Technical Report: doi.org/10.6028/NIST.TN.2160

Work Experience

Software Engineering Intern, Google Summer 2021

- Contributing to natural language processing research for new product development

Software Engineering Intern, Duolingo Summer 2020

- Contributed to machine learning research in the language learning app's Learning AI Lab
- Worked on personalized learning through adjustments to Duolingo's BirdBrain model

Teaching Assistant, Independent Work Seminar in Natural Language Processing 2020

- Assisted students with approaches to natural language processing research

Honors and Awards

- Outstanding Senior Thesis Award, Princeton Computer Science 2021
- Sigma Xi Book Award for Outstanding Undergraduate Research 2021
- Elected to Phi Beta Kappa Honors Society and Tau Beta Pi Engineering Honors Society 2021
- Outstanding Undergraduate Researcher Award honorable mention, Computing Research Association 2020
- Distinguished Hispanic Scholar, Hispanic Alliance for Education 2018

Other Activities

- Founder and President, Princeton Computational Linguistics Society 2019-2021
- Mentor, Princeton Women in Computer Science 2018-2021
- President, Princeton Quiz Bowl 2020-2021