

Olivia Winn

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Objective

Recent PhD graduate with expertise in machine learning, large language models (LLMs), and multimodal deep learning. Eager to jump into a challenging research position with an intelligent team. Determined to work on real-world problems and make a real, positive difference in the world.

Education

PhD, Columbia University, NYC 2023

Advisor: Dr. Smaranda Muresan

Thesis Title: "Seeing Red" or "Tickled Pink"?: Investigating the Power of Large Language Models Through Color, Emotion, and Metaphor

- * Disambiguated relative descriptions through **award-winning work** grounding the semantics of comparative color terms.
- * Studied subjective emotional interpretation by **designing a new task** which deep learning models to recolor images based on desired emotional response, and output textual explanations for the recoloring.
- * Understood metaphors through a **novel AI approach** incorporating both LLMs (GPT3) and diffusion models (Dall•E) to visualize metaphoric phrases, using prompt engineering and human-in-the-loop strategies.

B.S., Columbia University, NYC 2014

Major: Computer Science; **GPA:** 3.7

Experience

Intern, Grammarly, NYC June 2019 - August 2019

Mentors: Dimitris Alikaniotis, Joel Tetreault

- * Individualization of emotion understanding (intended and perceived) in Reddit discussion forums by automatic personality trait detection identify author intent and predict reader response through a multi-headed neural network.

Researcher, CAVE Computer Vision Lab of Columbia University, NYC September 2014 - March 2015

Advisor: Prof. Shree Nayar

- * Worked on high-frequency information tasks such as gaze-locking algorithms and a blink detection based user interface.
- * Performed shape restoration from refracted light and scene reconstruction from foveated images.

Selected Publications

I Spy a Metaphor: Large Language Models and Diffusion Models Co-Creat Visual Metaphors. Tuhin Chakrabarty¹, Arkadiy Saakyan¹, Olivia Winn¹, Artemis Panagopoulou, Yue Yang, Marianna Apidianaki, Smaranda Muresan. In Findings of the Association for Computational Learning (ACL) 2023

FeelingBlue: A Corpus for Understanding the Emotional Connotation of Color in Context. Amith Ananthram, Olivia Winn, Smaranda Muresan. In Transactions of the Association for Computational Learning (TACL) 2023

"Lighter" Can Still be Dark: Modeling Comparative Color Terms. Olivia Winn, Smaranda Muresan. In Proceedings of the Association for Computational Learning (ACL) 2018

Best Short Paper Award

Skills

Fluent

Python, PyTorch, C, C++, Matlab, Java, Tensorflow; Perl, R, HTML/CSS, UNIX

Well-Versed

LLM architectures, multi-modal neural network approaches, natural language processing, computer vision, data processing

Passions

Classical pianist, chef, baker, runner, sci-fi enthusiast, reader, tabletop & board gamer

