Generative AI for Medical Crowdfunding

Student Researcher: Caroline Arnold

Mentor: Dr. Larry Xu

Overview

O1 Introduction

What is GoFundMe, and why is medical fundraising important?

03

Results

How do human vs. Al-generated campaign descriptions vary? 02

Objectives

How can GPT-3 optimize crowdfunding campaigns?

04

Future Work

How do we perceive Al-generated campaigns?

Introduction

In the United States,

- A hospital visit costs \$2,883 per day on average
- Medical debt is cited in over 60% of bankruptcies

Annually, GoFundMe users

- Launch over 250,000 medical fundraising campaigns
- Raise over \$65 million for medical expenses

Between 2016 and 2020,

- Less than 12% of campaigns met their goal
- Low-income communities raised the least

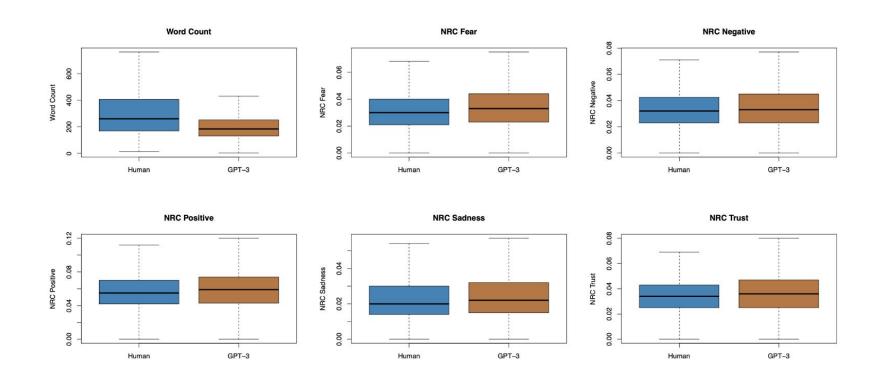
Objectives

How do medical crowdfunding campaigns differ from Al-generated replications, and which is more successful with respect to fundraising?

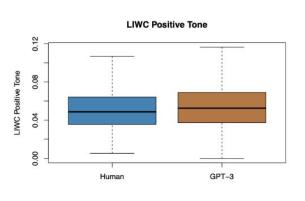
So far, we have

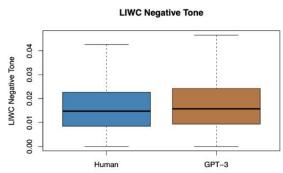
- Collected data from 1000 GoFundMe campaigns
- Prompted GPT-3 to rewrite each description
- Used NRC and LIWC to analyze differences in sentiment expression

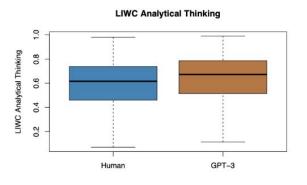
NRC Analysis

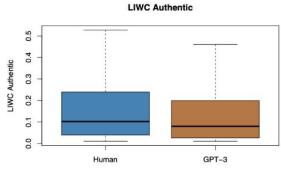


LIWC Analysis - Tone

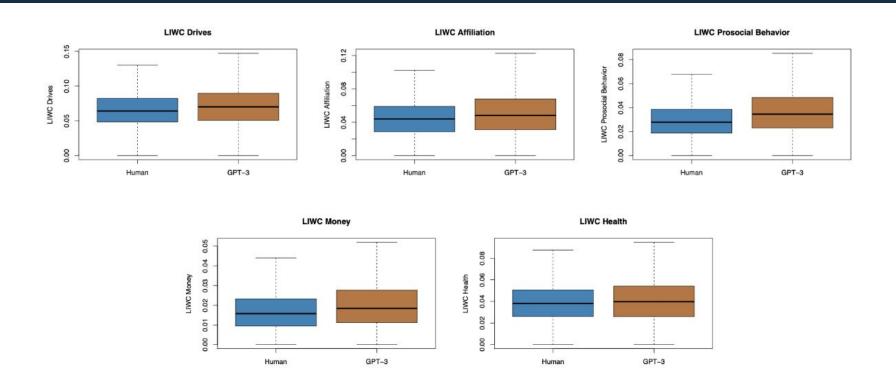




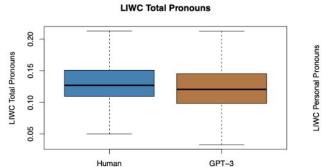


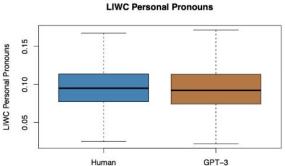


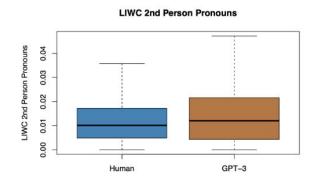
LIWC Analysis - Motivation



LIWC Analysis - Pronouns







Results

- GPT-3 displays more emotional range, despite also employing a more analytical tone
- Original descriptions are more likely to refer to oneself, while AI-generated descriptions are more likely to appeal to the reader

Future Work

We aim to

- Develop a fine-tuned model
- Work with survey respondents to analyze public perception of Al-generated campaigns

References

Czarnek G, Stillwell D (2022) Two is better than one: Using a single emotion lexicon can lead to unreliable conclusions. PLOS ONE 17(10): e0275910.https://doi.org/10.1371/journal.pone.0275910

Eckart, Kim. "For the Uninsured, Crowdfunding Provides Little Help in Paying for Health Care and Deepens Inequities." *UW News*, 3 Feb. 2022, www.washington.edu/news/2022/02/03/for-the-uninsured-crowdfunding-provides-little-help-in-paying-for-health-care-and-deepens-inequities/.

Maurice Jakesch, Megan French, Xiao Ma, Jeffrey T. Hancock, and Mor Naaman. 2019. Al-Mediated Communication: How the Perception that Profile Text was Written by Al Affects Trustworthiness. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19). Association for Computing Machinery, New York, NY, USA, Paper 239, 1–13. https://doi.org/10.1145/3290605.3300469

Milliken, Maureen. "Hospital and Surgery Costs." *Debt.Org*, 22 June 2023, www.debt.org/medical/hospital-surgery-costs/.

Krystallia Moysidou & J. Piet Hausberg (2020) In crowdfunding we trust: A trust-building model in lending crowdfunding, Journal of Small Business Management, 58:3, 511-543, DOI: 10.1080/00472778.2019.1661682