

Thesis Project Portfolio

The Reality of Statistics: Creating Performance Evaluation Models for Survivor at UVA
(Technical Report)

The Monster: Assessing the Negative Opinions on AI Generated Music
(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

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Spring, 2024

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Executive Summary

The world of technology is ever-evolving and has continually pushed to perform tasks once done by human beings. From inventions as early as the cotton gin, society has adapted to a wide range of technology that has changed the very way we function. Now, with the rise and optimization of AI and machine learning, technology now stands to perform another vital human function: thought. From the creation of original works to the ability to form analysis-based opinions, our developed technology now stands to replicate our own ability to think. For this technical report and STS paper, I took on two differing versions of this ability in thought. In my technical report, “The Reality of Statistics: Creating Performance Evaluation Models for Survivor at UVA,” I used technology’s ability to form analysis-based opinions by using quantitative data from Survivor at UVA compared to qualitative ratings to create an evaluation model to determine optimal performance in the competition. In my STS paper, “The Monster: Assessing the Negative Opinion on AI Generated Music,” I analyzed the public opinion on AI generated music, focusing on the negative opinion and attempting to ascertain what about AI generated music creates this negative opinion through the utilization of Martijntje Smits’s Monster Theory.

My STS paper, “The Monster: Assessing the Negative Opinion on AI Generated Music,” evaluated the contentious realm of AI-generated music and examined the negative opinions surrounding it. Utilizing Martijntje Smits’s Monster Theory as a conceptual framework, the study analyzed how the fusion of human creativity with machine-generated output challenges traditional cultural categories. Drawing on blind studies comparing AI-generated music to composer-made music, the paper explored reactions from both industry professionals and “novices.” Through my analysis, I was able to find the basis for the widespread apprehension,

characterized by a "monster exorcism" perspective, particularly evident in public disapproval and industry resistance, and the difference in audience approval for both professionals and “novices” between AI-generated music and composer-generated music. This suggested an intrinsic discomfort with the music itself, rather than merely its artificial origins. To foster broader acceptance, the paper proposed two potential approaches: "monster assimilation" or "monster adaptation." While a complete redefinition of art seems improbable to allow for “monster assimilation,” incremental adjustments, creating a balance between human creativity and machine assistance, can allow AI-generated music to complement traditional artistic processes rather than replace them entirely to allow for “monster adaptation.” In conclusion, this paper underscores the intricate interplay between technology, creativity, and societal norms in music composition, and how the fusion of cultural categories does play a factor in the overall negative opinion.

In my technical report, “The Reality of Statistics: Creating Performance Evaluation Models for Survivor at UVA,” the focus was on developing a statistical framework that would create an overall “game score” to assess the performance of contestants in Survivor at UVA, a university-based club inspired by the CBS show Survivor. The objective was to create a model that correlates various gameplay statistics with post-competition or “season” rankings assigned by the executive team, who evaluate contestant performance. Using SQL for data management and Python for visualization, a model was constructed by analyzing the relationship between different gameplay metrics and executive rankings. I calculated linear relationships and coefficients to develop a weighted scoring system that accurately reflects executive rankings. After rigorous testing and analysis, an optimized scoring system was derived, demonstrating a strong correlation (R^2 value of 0.8) with executive rankings. The project successfully created an

evaluation score for Survivor at UVA, providing contestants with a quantitative measure of their gameplay performance. The system promotes competition and camaraderie within the Survivor community at the University of Virginia and externally to the Survivor community at other universities.

Through these reports, I believe that I was able to capture the potential that our technology currently has in modeling human thought, and also how the public perceives that. In the future, I would like to expand my research into this concept and truly begin to do a deeper analysis into what separates the idea of human thought and the state-of-the-art of our current technologies. These will be continually evolving ideas as our technology evolves with it, so this comparison between technology and human's ability to think will need to be constantly assessed and re-assessed, especially when it comes to our own concern in what the future holds for creatives and other professions that rely on human thought to operate and could, potentially, be replaced by newer-aged technologies.

For aiding in this final capstone project, I would like to thank Professor Kent Wayland for his help in the development and refining of my STS paper and for his patience and understanding throughout this process. I would also like to thank Rosanne Vrugtman for her guidance in my technical report. And finally, I would like to thank Survivor at UVA, specifically the executive team at Survivor at UVA, for providing me with the data necessary for completion of the technical report.