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AI System Beats Vegas at NBA Forecasting

Season-long study shows artificial “hive mind” of sports fans and neural networks beats Vegas by a wide margin, generates 57% return on investment

San Francisco, CA – January 4th, 2019 – Researchers today presented at CICN a study showing that a hybrid system combining human insight and machine learning software was able to outperform Vegas betting markets over the course of an NBA season. In this study, a hive mind of basketball fans and enthusiasts worked as a Swarm AI system to predict the winners of 238 NBA matchups and achieved a statistically significant 25% Return on Investment (ROI) wagering on all games. When dense neural networks were used to create a “Conviction Index” that could determine which of those 238 predictions would produce the most valuable results, the ROI more than doubled to 57%, suggesting that the combination of swarming and neural networks could be the optimal way to amplify human intelligence.

Simulating these results 10,000 times, researchers also found that, regardless of which strategy was used, the probability of the Swarm AI system producing a positive return hovered around 90%, again with average returns between 25 and 57%. In the less than 10% of the time where a negative ROI was incurred, the average decline was less than 6.5%. That means the Swarm AI system’s forecasts offered a reliable and consistent method for maximizing Return on Investment while minimizing the downside risk typically associated with sports wagering.

The technology, developed by Unanimous AI of San Francisco, CA employs a unique combination of real-time human input and AI algorithms that are modeled after swarms in nature. In this study, it operated by collecting input from 28 to 43 average sports fans in real-time, using intelligence algorithms to optimize their combined their knowledge, wisdom, insights, and intuitions. Known as [Swarm AI](#), the technology has enabled accurate forecasts across a wide range of applications, from sports to medical diagnostics and financial markets. This is the same “hive mind” technology that was used at the Stanford University School of Medicine to amplify the intelligence of radiologists. In that [recently published study](#), small groups of radiologists connected together by AI algorithms in real-time, were able to reduce their diagnostic errors by over 30%. The NBA study, however, is a milestone in the combination of the Swarm AI system with dense neural networks to amplify intelligence even further.

Swarm Intelligence, the science behind Swarm AI technology, is the reason why birds flock, bees swarm, and fish school – they are smarter together than alone. Across countless species, nature shows us that by forming closed-loop systems, groups can produce insights that greatly exceed the abilities of any individual member. While humans have not evolved this ability naturally, Swarm

AI technology enables this artificially, allowing groups to amplify their intelligence by forming real-time swarms.

“We created Swarm AI in order to amplify human intelligence, not beat Vegas,” said Dr. Louis Rosenberg, CEO of Unanimous AI and a co-author of the paper. “So we’re pleased by the results of this study, but even more excited to continue to apply this technology to forecasting in a variety of others important arenas, from business insight to financial forecasting and medical diagnostics.”

The full paper, [*“Dense Neural Network used to Amplify the Forecasting Accuracy of real-time Human Swarms”*](#) will be presented by Dr. Louis Rosenberg in Hawaii at the Computational Intelligence and Communication Networks (CICN) Conference on January 4th, 2019. More information is available [HERE](#).

About Unanimous AI

Unanimous AI is a Silicon Valley company that has pioneered Swarm AI® technology, a new form of AI that combines real-time human insights and AI algorithms modeled after natural swarms. Unanimous has generated an impressive track record of predictions, forecasts and insights. The company’s technology has outperformed traditional AI systems and human experts in many high-profile challenges.

Unanimous offers Swarm AI® technology through its Swarm for Business Teams™ and Swarm for Consumer Intelligence™ products. Swarm for Business Teams amplifies the intelligence of business teams to generate AI-optimized forecasts and prioritizations -- and fuel AI-optimized decisions. Swarm for Consumer Intelligence amplifies the intelligence of consumer groups with more insight and nuance than legacy market research methods.

Swarm AI was recognized as SXSW’s 2018 [“Artificial Intelligence Innovation of the Year”](#) and was described in a popular [TED TALK](#). For more about Unanimous AI, visit <http://unanimous.ai>

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