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# Leveraging Machine Learning for Wellbeing Research in Marketing: Enhancing Federal Nutrition Programs and Food Decision-Making

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## Abstract

Machine learning offers innovative tools to enhance research on federal nutrition programs and food decision-making, moving beyond traditional methods. Algorithms extract key features to pinpoint potential program issues, allowing for more refined predictions about participation and behavior using large-scale data, unlike prior studies that typically rely on controlled lab settings. We propose a case study using machine learning to predict participation in a major nutrition education program, with implications for diet quality and food security. Validation of machine learning insights will involve qualitative research and surveys. This approach demonstrates the potential for connecting wellbeing research and marketing by offering deeper insights into participant behavior and program effectiveness, which can inform marketing strategies for promoting healthier food choices and improving public health outcomes.