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# Evolution of Entertainment: A Trend Analysis using ARIMA Model through Machine Learning Approach

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**Abstract:** The over-the-top (OTT) media market has witnessed significant expansion recently, a growth surge amplified by the COVID-19 pandemic, which unexpectedly drove increased digital content consumption. This study investigates the worldwide viewing patterns within the rapidly evolving OTT sector, with a particular emphasis on Netflix. It recognizes the crucial impact of digital transformation and greater internet access in transforming the entertainment and media industries, resulting in widespread acceptance of OTT platforms fuelled by improved connectivity, cost-effective devices and data plans, user convenience, and a broad range of content. Capitalizing on the rising prevalence of connected devices and changing consumer behaviours, this research utilizes predictive methods, specifically time series analysis via Machine Learning, to ascertain the global trend in weekly viewing hours of Netflix programs. The objective of this analysis is to illuminate the shifting media consumption habits in the digital era and the prominent role of OTT platforms like Netflix in the global entertainment arena.

**Keywords:** OTT Platforms, Black Swan Event, Global Viewership, Time Series, On-Demand Entertainment

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