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Technology Dilemma in the Age of AI

How to Compensate Technology Savvy Employees?

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Artificial Intelligence (AI) is a ubiquitous economic, societal and organizational phenomenon (Berente et al. 2019), that refers to machines that are able to perform cognitive functions (Rai et al. 2019). AI has been used in various applications such as machine learning, natural language processing, autonomous vehicles, robotics, facial recognition etc. Technology that involves AI provides unique opportunities for creating new intelligent products, designing novel services, offering new business models and performing routine tasks (Berente et al. 2019). Offering wide possibilities, AI may disrupt existing business models and processes, and by doing so, may affect workforce. For example, advances in AI enable workers in legal industry to automate the workflow and routine tasks, and help retrieve, aggregate and analyze hundreds of pages in a much shorter period of time (Kline 2019). While increase in productivity is certainly a benefit, billable industries, such as consulting and legal services, are known for direct correlation between time spent on a project/case and revenue. Thus, utilizing of AI leads to a dilemma. If the formula 'more hours more revenue' is applied, then employees, who embrace AI and perform tasks faster, may encounter counterproductive consequences manifested in diminished revenues as a result of completing tasks too quickly. For example, if employees A and B are compensated per hour at the same rate, and A performs a task in 6 hours and bills for 6 hours, and B performs the same task in 9 hours and bills for 9 hours, then, considering that quality is constant, B is getting 50% more reward. Similar scenarios may lead to decreased motivation and reluctance of AI adoption.

While the question of adopting AI technologies by billable industries as a whole is interesting, the focus of this research narrows down to the equilibrium of balancing opposing forces of efficiency and financial rewards for employees adopting AI-based technologies. The goal of this research is to devise methods that provide solutions for problems with optimal time and reward constraints in billable industries. A variety of techniques will be employed with a focus on solving combinatorial problems using techniques from constraint programming and operations research.

References

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