

Title: Factors Influencing the Usage of Artificial Intelligence among Bangladeshi Professionals: Mediating role of Attitude Towards the Technology

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Abstract: This study investigates the factors influencing the usage of artificial intelligence (AI) among Bangladeshi professionals, with a focus on the mediating role of attitude towards technology. The purpose is to enhance understanding of AI adoption using elements from the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM). A quantitative research design was employed, utilizing a questionnaire distributed to 490 professionals, resulting in 190 usable responses. Data were analyzed using SmartPLS to assess the relationships among performance expectancy, effort expectancy, social influence, facilitating conditions, perceived usefulness, perceived ease of use, attitude towards technology, and behavioral intention to use AI. The findings indicate that performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived usefulness significantly influence AI adoption. Social influence and perceived ease of use exhibit mediated effects through attitude towards technology. The research is limited by

its use of convenience sampling and a single-country focus, which may affect the generalizability of the findings. The study's practical implications include guiding policymakers and industry leaders in designing targeted strategies to promote AI adoption among professionals. Social implications highlight the importance of addressing social factors and perceived ease of use to foster positive attitudes towards AI. This research contributes originality by integrating UTAUT and TAM models in a developing country context, providing nuanced insights into AI adoption among professionals. Future research should explore AI adoption across different developing countries and consider longitudinal and qualitative studies for a deeper understanding of technology adoption dynamics.

IEEE Keywords

- [Industries,](#)
- [Technology acceptance model,](#)
- [Focusing,](#)
- [Developing countries,](#)
- [Market research,](#)
- [Artificial intelligence,](#)
- [Socioeconomics,](#)
- [Context modeling](#)

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- [Technology Adoption,](#)
- [UTAUT,](#)
- [TAM,](#)
- [Bangladeshi Professionals,](#)

- [Attitude Towards Technology](#),
- [AI Adoption Factors](#),
- [Behavioral Intention](#)

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