



# The Impact of Artificial Intelligence on Employees' Performance in Hotel Sector

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Ph.D.) in Tourism and Hotels, Hotel Studies Department, Faculty of Tourism and Hotels, Fayoum University

### By:

## Eslam Sayed AbdelGhany Yasin

B.SC., Hotel Management, Faculty of Tourism and Hotels, Fayoum University, 2015

M.SC., Hotel Management, Faculty of Tourism and Hotels, Fayoum University, 2019

### **Supervised by:**

### Prof. Ashraf El Sayed Abdelmaboud

Professor of Hotel Studies, Faculty of Tourism and Hotels, Fayoum University

#### Prof. Hesham Ezzat Saad

Professor of Hotel Studies, Faculty of Tourism and Hotels, Fayoum University

### Dr. Omar El Sayed Ahmed Qoura

Associate Professor of Hotel Studies, Faculty of Tourism and Hotels, Fayoum University

FAYOUM UNIVERSITY 2022

## The Impact of Artificial Intelligence on Employees' Performance in Hotel Sector

#### **Abstract**

Robots (R), artificial intelligence (AI), and service automation (SA) (RAISA) technologies are widely used in the tourism and hospitality industries worldwide. Although the study in this area is gaining traction, it has been largely ignored in the Egyptian tourism and hospitality industries. As a result, there is a lack of study on artificial intelligence and employees' performance in the hotel industry. As a result, Artificial Intelligence is the most recent technological trend that is increasingly being integrated into our daily lives. Artificial intelligence is used in a variety of fields. As a result, one of the most important fields to benefit from these technologies is employees. On the other hand, it threatens to replace jobs.

This study aims to identify the impact of artificial intelligence on employees' performance in the hotel industry. To complete this study, data were gathered from managers and employees who work in Five-Star Hotels in greater Cairo, Egypt, while primary data was gathered through an empirical study conducted by questionnaire tools on a convenience sample of employees and managers in hotels and semi-structured interviews, as a qualitative data collection method, were created and conducted in an individual face-to-face way with 20 IT managers, secondary data was gathered from studies related to artificial intelligence and employees' performance and the data were analyzed using frequencies and descriptive analysis. Finally, using SPSS version 25, bivariate Pearson correlation and simple linear regressions were used to test the impact

The results showed that the hotel industry in Egypt uses artificial intelligence techniques, but in an unclear way for some hotel workers are not aware of the existence of these technologies; additionally, there is a correlation between artificial intelligence components and employees' performance dimensions. Finally, the results show that the efficiency and ease of use of artificial intelligence have a significant impact on employees' performance dimensions in the hotel industry. Efficiency has the greatest impact on employees' performance, followed by Ease of use, whereas Automation has no significant impact on employees' performance dimensions. The results confirmed that there are no robot applications in the Egyptian sector. However, there are some AI (Chabot's, AI search platforms) and SA technologies adopted (digital kiosks, virtual

reality, mobile check-in/out, smart rooms). From the perspective of employees and managers, the main barriers to applying artificial intelligence are cost and a lack of qualified human resources. However, the most significant benefits of artificial intelligence are increasing the quality of services provided, improving performance, reducing human errors, and overcoming problems related to employees' mental and psychological states. The disadvantages are the large investments required and the reduction in essential human interactions between customers and employees. Furthermore, the researcher demonstrates that the hotel industry is undergoing significant technological changes in Egypt Vision 2030. The current study was conducted in Five-Star Hotels in Cairo, Egypt. As a result, it suggests that future studies collect more data over a longer period to test the measuring instrument. It also suggests conducting similar studies in other sectors in Egypt as well as the same sector outside Egypt to test the generalizability of its findings and also suggested similar studies in fast-food restaurants in Egypt, so this study may be considered one of the few studies that discuss the impact of artificial intelligence on employees' performance in the hotel sector.

Keywords: Artificial Intelligence, Employees' Performance, Hotels, greater Cairo, Egypt