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Staff Optimization using Artificial Intelligence

A. Mausam Karmore, B. Rasha Dubey, C. Shweta Awanuriwar, D. Lakshya Chelani, E. Rashmi Dagde
Department of Computer Science and Engineering
Jhulelal Institute of Techonology, Nagpur, Maharashtra, India.

Abstract: *In recent years, with the increase in the number of shopping centers and consumer expectations, comprehensive research on the performance evaluation of shopping centers has started to be needed. In the performance evaluation process, it is very important to determine the correct staffing criteria. In this study, the staffing criteria were determined by reviewing the literature and interviewing experts and managers in the shopping center sector. In the next step, the Analytical Hierarchy Process (AHP), a multi-criteria decision making (MCDM) method, was used to determine the significance levels of these criteria and a new performance index model was hereby developed. The proposed method consists of a total of 140 criteria including six main criteria (NO. of MOBs, NO. of Owners, Category of MOBs, the staff in MOBs, Ratio of MOBs, Customer Overview.), and other sub- criteria. As far as we know, this study is the first to propose a model for measuring the performance and staffing of shopping malls.*

Keywords: Shopping malls, multi-criteria decision making, analytical hierarchy process, performance measurement.

I. INTRODUCTION

Human Resources Management has undergone profound transformations as a result of diversification of issues related to the Malls function and a strengthening of its influence in the strategic decision-making processes of companies. Most mall operators decide opportunistically which tenants to lease to and which units within the mall each store will occupy. Some malls have a basic tenant-category segmentation but lack a systematic and analytical approach to prioritizing, prospecting for, and acquiring tenants. They don't have a data-driven way of answering important questions, As people's traditional consumption habits have changed, so too have shopping places. Shopping places have taken different forms and shapes in the past; the shopping mall is the most recent form. The concept of the shopping mall is of big structures in which different needs are met, that include plenty of shopping stores, are considered life and entertainment centers, and are located in the city center or periphery. Shopping malls are no longer visited for only shopping but have been turned into places also hosting social, cultural, and entertaining activities. And also, shopping malls are dynamic environments, in which shops change, promotions appear and disappear continuously for that all things we will be needing a good and managed staff to handle them so that's why we are proposing our system of staff optimization using AI

II. LITERATURE REVIEW

Over the last years, there have been some researchers who have completed their work successfully on Human resources analytics. We have chosen to collect the various researches on this subject during the period between 2008 and 2018. The majority of articles dealing with topics related to the field of artificial intelligence and human resources were published in newspapers from 2015 to 2018, especially between 2015 and 2017. In 2018, the number of researchers involved increased between the months of March and September and during the month of November. Hundreds of articles have appeared in scientific journals related to computer science such as (Future Generation Computer Systems, International Journal of Interactive Multimedia and Artificial Intelligence, International Journal of Computing and Informatics, The Scientific World Journal, … etc) while others have appeared in human resources management journals (for example Management: Journal of Contemporary Management Issues, Journal of Business Strategy, Business Horizons, … etc). The exponential growth of Shopping and Multiplex MALLs articles number from 2008 to 2018 is shown in Figure 1.

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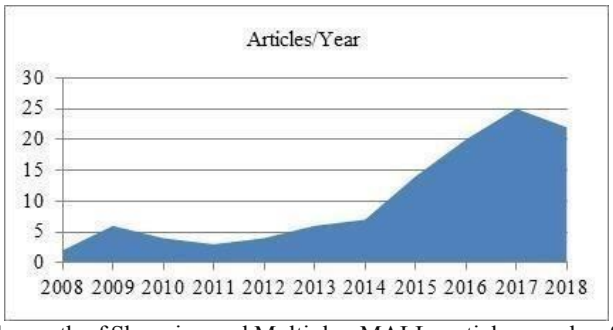

Figure 1: The exponential growth of Shopping and Multiplex MALLs articles number from 2008to 2018

III. METHODOLOGY

- **Research Methodology:** To develop this Staff Optimization Assistant we have Six Modules, which are as follows: Shop Details., Owner Details, Category of Shops., Staff in Shops, Ratio of Shops, Customer Overview.
- **Shop Details:** Every shopping Mall has different types of shops which have different sizes, Floors, number of shops on floors, structures, etc. Managing and maintaining all data will be quite difficult. This module will hold all the information regarding the Number of MOBs. Thiswill be the first module of Staff Optimization.
- **Owner Details:** This will be the second module, which contains information about every shop owner, whether they are the first owner or the second owner(Partners),if a single person holds two or more two MOBs we can categorize theowner.
- **Category of Shops**: This module will hold information or Data about Multiplex, variety of Shops can be play Stations, Ice cream Parlors, Grooming Shops, Clothing and etc. all categories can be undertaken by AIMY. This will be the Third Module.
- **The staff's in Shops:** The most important part of our system will be this module which plays a vital role. Her we can categorize all the Staff of the whole mall which belongs to different floors and different departments. Staff will be also categorized as their work skills and qualification for the mall's general and future conditions. Here's e Data about staff like personal details, their CV, salary and attendance in working and non-working days. Staff reviews about their working history, customer handling, and problem-solving capability all will be handled bytheir five-star rating modules.
- **The ratio of Shops:** this module will contain MOBs area Owen by owner. Which will be containing information such As the area required by them, the Cost of the MOB, sessions when they holding a particular area, and Documentation about MOBs. Agreement or bond signed by the MOB handler.
- **Customer Overview:** This will be the last module of AIMY, which holds the Data or information about the customer such as their reviews, positive Approach, no of time customer visited and etc.

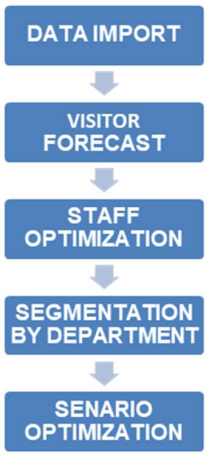

Fig. Data flow diagram for staff optimization Detection

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IV. CONCLUSION

AIMY- Staff optimization assistant can be most useful for managing and optimizing Staffing and Mall Data. **AIMY** will be the point of AI development towards Malls Staffing. **AIMY Artificial Intelligence** will help towards leading the business also because of its Data Analytics results.

V. FUTURE SCOPE

This will be a step towards turning the traditional way of handling business into AI. With the help of Artificial Intelligence business aspects and future planning can be done with last year's Business Ratio. AIMY will not only help in staff optimization but also helpful for managing complete mall different types of MOBs and their business, Owner, Staffing, and Ratio details.

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AUTHOR DETAILS

First A. Mausam Rajesh Karmore
Birth place is Nagpur and Date of Birth is 09 August 1999. Pursuing Bachelor of Engineering in Computer Science and Engineering from Jhulelal Institute of Techonology College of Nagpur, Maharashtra, India.

Mr. Mausam
Mr. Mausam, NSS Club Head and Executive Member of Student Representative Council at Institute (2021-2022) - RTMNU organize inter College Cricket tournament champion (2019- 2020) - IEEE Computer Society and IEEE Nagpur Subsection Congress Member (2019 - 2020) - Conducted & Participated technical and non- technical events in college and outside college.

B. Raksha Dubey C. Shweta Awaruniwar D. Lakshya Chelani