INTRODUCTION

The tourism sector has emerged as a promising industry for global economic growth. Despite global crises, the tourism sector has shown positive growth since 1950. At that time, the number of tourist arrivals reached 25 million people, which increased to 278 million people in 1980, 528 million people in 1995, and reached 1.1 billion people in 2014 (Ratman, 2016). These data indicate that the tourism industry has the potential to drive economic growth. In Indonesia, the tourism sector has experienced rapid development. Bali, as one of the famous tourist destinations, is not only popular in Indonesia but also at the regional (Asia) and international levels [1]. In Bali, tourism has become one of the main focus sectors alongside agriculture and small to medium-scale industries. The growth and development of the tourism sector in Bali have significantly contributed to regional development and the local economy. Along with the progress of tourism, there is an increasing abundance of information about Bali. However, this also creates difficulties for tourists in selecting information that aligns with their preferences when planning a visit to the island of Bali [2]. Additionally, the book entitled "*Recommender Systems: introduction and Challenges*" clarifies that users typically make bad decisions when it comes to selecting information, which is a common consequence of information overload. For instance, people frequently struggle to select the appropriate goods and services on e-commerce sites. Users are overwhelmed by the abundance of information available, which confuses them and causes them to make bad decisions. In a different situation, when it comes to choosing music genres, users frequently fail to identify the genres that match their preferences, which makes listening to the selected genre of songs quickly boring. In facing the challenge of excessive information, a recommendation system can be an effective solution to assist tourists in finding recommendations that suit their needs [3]. A recommendation system is a software technology that provides suggestions for items that align with the user's preferences [4]. Over the years, various approaches have been developed to generate recommendations. The application of recommendation systems is widespread in the fields of music, movies, and commerce. Some examples of applications that use recommendation systems include movie recommendations on MovieLens, music recommendations on Spotify, video recommendations on YouTube, and product recommendations on Shopee [5]–[8]. In this particular study, the researchers focused on developing a tourism recommendation system specifically tailored for the Bali region. They employed a Weighted Hybrid technique, which integrates two methods using weighted values, to generate personalized recommendations. This approach takes into consideration the prediction values derived from multiple recommendation system methods and treats them as variables in a linear combination. The methods utilized in the research encompass CF with Singular Value Decomposition (SVD), known for its ability to minimize evaluation results and provide users with relevant recommendations [7]. Additionally, the CB method was employed, incorporating Cosine Similarity and TF-IDF (Term Frequency Inverse Document Frequency) calculations, along with RandomForest algorithm, as they have demonstrated improved accuracy and commendable performance [14]–[16].The predictions obtained through the Weighted Hybrid technique were assessed using evaluation metrics such as MAE (Mean Absolute Error), MSE (Mean Squared Error), and RMSE (Root Mean Squared Error) [17]. The primary aim of the authors was to explore and analyze the effectiveness of the combined approach in comparison to the individual methods. Moreover, the proposed method aimed to surpass the accuracy achieved by CF and CB methods.