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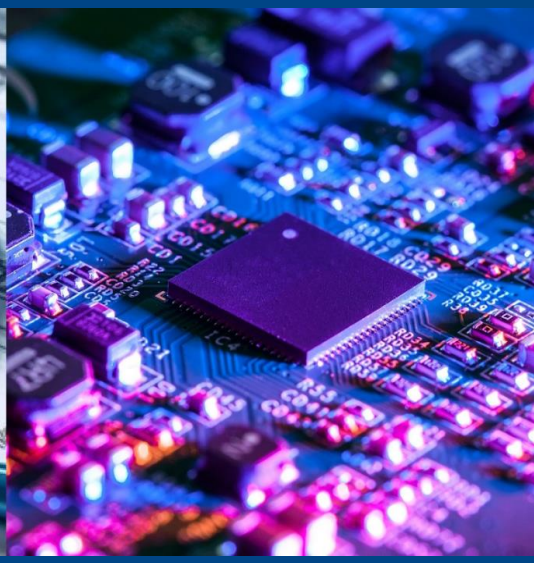

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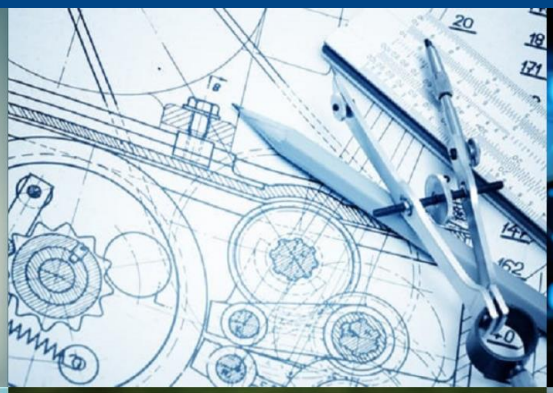

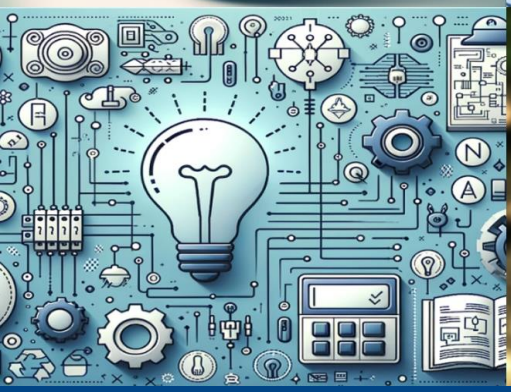

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Travel Recommendation System using Social Media Profile Images and user Preferences

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ABSTRACT: Travelling is one of the most enjoyable activities for people of all ages. It is constantly looking for innovative solutions on how to tailor travel recommendations to the needs of its customers. The purpose of our proposed recommendation model is to suggest travelling countries based on photos from the user's social network account and metadata associated with the photos. Such recommendation models are highly dependent on the data used in the model preparation steps and, on the technologies, and methods implemented in the model. The newly collected data from the Instagram users' accounts were used in the model preparation. The recommendation system is based on the combination of four methods: object detection, similarity measures, classification, and data clustering. The novelty of the proposed recommendation model is that it adopts different data (Instagram photos) for travel direction recommendation, defines a new combined method, integrates results of similarity measurement and SOM application results into one final recommendation, and estimates the parameter impact for different components of recommendation model .A proposed evaluation measure has been used to conclude the results of the recommendation model and as a result the names of the travelling countries have been recommended.

I. INTRODUCTION

The proposed recommendation model aims to personalize travel suggestions by analysing photos and associated metadata from users' social network accounts, particularly Instagram. By leveraging newly collected data from Instagram users, the model integrates four key methods: object detection, similarity measures, classification, and data clustering. This innovative approach combines different data sources to recommend travel destinations based on users' photo content. A distinguishing feature of this recommendation model is its utilization of Instagram photos as a basis for travel recommendations. It introduces a novel combined method that integrates similarity measurements and Self-Organizing Maps (SOM) results to generate personalized travel recommendations. Moreover, the model assesses the impact of different parameters on the recommendation process, enhancing its adaptability and effectiveness. To evaluate the recommendation model, a proposed evaluation measure is employed, which assesses the accuracy of recommended travel destinations against users' actual visited countries. The results indicate promising performance, with an average of 63% of users finding recommended destinations matching their visited countries. The results of the proposed recommendation model are promising, and the validation results demonstrate that on average 63% of the users who visited countries match the recommendations provided for the trip directions, while the accuracy of recommendations, matching user visited countries, but not presented in the photos for recommendation estimation, on average was 96%. The accuracy performance is very positive, while the recommendation system is fully automated and machine learning based. With time, the accuracy of the model may even increase by adopting the photo metadata (location).

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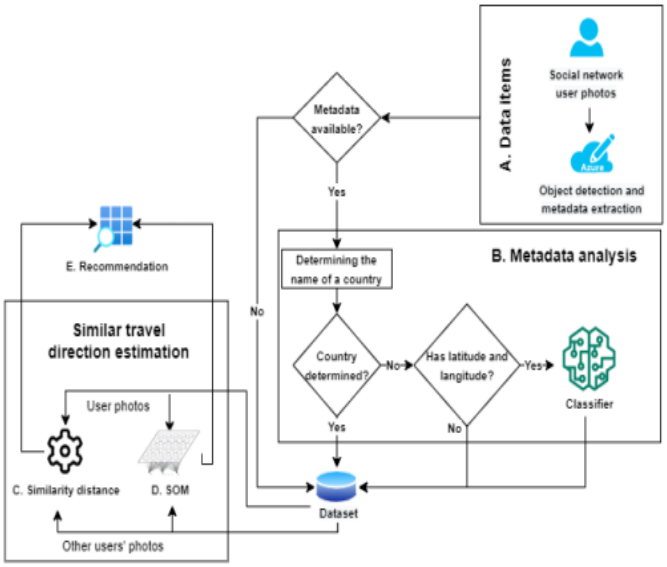

Figure 1: System Architecture

II. LITERATURE REVIEW

Ramp Secret Sharing Scheme (RSSS) LI formalizes a convergent key management scheme i.e. Dekey which is efficient and reliable for secure deduplication. Dekey set de-duplication between convergent keys and distributes those keys across multiple key servers while preserving the semantic security of convergent keys and privacy of outsourced data. Dekey is implemented using the Ramp secret sharing scheme. Dekey uses RSSS to collect convergent keys. Its idea is to permit deduplication in convergent keys and distribute the convergent keys over various KM-CSPs. Instead of encrypting the convergent keys on a per-user basis, Dekey builds secret shares on the original convergent keys (that are in plain) and assigns the shares over various KMCSPs. If many users share the identical block, they can access the same corresponding convergent key. This significantly decrease the storage overhead for convergent keys. In addition, this method provides fault tolerance and allows the convergent keys to remains accessible even if any subset of KM-CSPs fails.

Cloud Computing and Emerging IT Platforms this paper, author characterize Cloud computing and give the structural planning to making Clouds with business sector arranged. Resource allocation by utilizing advancements, for example, Virtual Machines (VMs). Authors additionally give bits of knowledge on market-based resource administration systems that incorporate both client driven service.

management and computational risk administration to manage Service Level Agreement (SLA) – arranged resource distribution. What's more, authors uncover our initial musings on interconnecting Clouds for progressively making worldwide Cloud trades and markets. At that point, we display some illustrative.

Cloud stages, particularly those created in commercial enterprises alongside our present work towards acknowledging market-situated resource portion of Clouds as acknowledged in Aneka venture Cloud innovation. Besides, author highlight the distinction between High Performance Computing (HPC) workload furthermore, Internet-based service workload. We likewise depict a meta-arrangement foundation to build up worldwide Cloud trades and advertise, and show a contextual analysis of outfitting 'Storage Clouds' for superior substance conveyance. At last, author finish up with the requirement for joining of contending IT ideal models to convey our 21st century vision. Leakage-Aware Multiprocessor Scheduling this paper, leakage-aware planning heuristics are introduced that decide the best exchange off between these three methods: DVS, processor shutdown, and finding the ideal number of processors. Exploratory results got utilizing a public benchmark set of assignment charts and genuine parallel applications demonstrate that our methodology lessens the aggregate vitality utilization by up to 46% for tight due dates and by up to 73% for free due

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dates thought about to a methodology that just utilizes DVS. Author likewise think about the vitality devoured by our booking calculations to two supreme lower limits, one for the situation where all processors ceaselessly keep running at the same recurrence, and one for the situation where the processors can keep running at diverse frequencies and these frequencies might change after some time. The outcomes demonstrate that the vitality decrease accomplished by our best approach is near these hypothetical limits.

Profit-drive schedule for cloud services with data access awareness this paper, authors address the compromise of these scheduling so as to clash targets service demands with the element production of service examples. In particular, author booking calculations endeavor to expand benefit inside the agreeable level of service quality indicated by the service buyer. Author's commitments incorporate the improvement of an evaluating model utilizing processor-sharing for cloud, the use of this estimating model to composite services with reliance thought, the advancement of two arrangements of service solicitation booking calculations, and the advancement of a prioritization arrangement for data service planning to amplify the benefit of data service.

Energy and Performance Management of Green Data Centres this paper, author try to handle this deficiency by proposing a precise way to deal with amplify green server farm's benefit, i.e., income short cost. In such manner, authors unequivocally consider reasonable service level agreement (SLAs) that as of now exist between information focuses and their clients. This model additionally fuses different elements, for example, accessibility of neighbourhood renewable force era at server farms and the stochastic way of server farms' workload. Moreover, authors propose a novel advancement-based benefit expansion procedure for server farms for two diverse cases, without and with behind-the-meter renewable generators. Authors demonstrate that the figured advancement issues in both cases are arched projects; in this manner, they are tractable and fitting for down to earth execution. Utilizing different test information what's more, by means of PC reproductions, authors evaluate the execution of the proposed advancement-based benefit expansion methodology and demonstrate that it fundamentally outflanks two practically identical vitality and execution administration calculations that are as of late proposed in the writing.

III. METHODOLOGY OF PROPOSED SURVEY

The Software Development Life Cycle (SDLC) is a series of stages that provide a structured approach to the software development process. It encompasses understanding the business requirements, eliciting needs, converting concepts into functionalities and features, and ultimately delivering a product that meets business needs. A proficient software developer should possess adequate knowledge to select the appropriate SDLC model based on project context and business requirements. Therefore, it is essential to select the right SDLC model tailored to the specific concerns and requirements of the project to ensure its success. To explore more about choosing the right SDLC model, you can follow this link for additional information. Furthermore, to delve deeper into software lifecycle testing and SDLC stages, follow the highlighted links here. The exploration will cover various types of SDLC models, their benefits, disadvantages, and when to use them. SDLC models can be viewed as tools to enhance product delivery. Therefore, understanding each model, its advantages, disadvantages, and the appropriate usage is crucial to determine which one suits the project context. The V-Model (Verification and Validation Model) is a structured Software Development Life Cycle (SDLC) approach that emphasizes early testing by integrating verification and validation at each stage of development. It follows a V-shaped structure, where the left side represents the verification phases (Requirement Analysis, System Design, High-Level Design, and Low-Level Design), and the right side represents the validation phases (Unit Testing, Integration Testing, System Testing, and Acceptance Testing). Each development phase has a corresponding testing phase to ensure that errors are detected early, reducing costs and improving software quality.

The verification phase focuses on planning and designing the system, starting with Requirement Analysis, where business and functional requirements are defined. This is followed by System Design, which outlines the system architecture, High-Level Design (HLD) that defines module interactions, and Low-Level Design (LLD) that details internal module logic. The validation phase begins after the coding phase and includes Unit Testing (validating individual modules), Integration Testing (ensuring module interaction), System Testing (checking overall functionality), and Acceptance Testing (verifying if the software meets user expectations).The V-Model offers advantages such as early defect detection, structured development, and reduced risks, making it suitable for small to medium-sized projects with stable requirements. However, it is rigid and not ideal for projects with frequently changing requirements, as modifications

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require restarting multiple phases. Overall, the V-Model is a well-organized and efficient approach when a project demands thorough testing at every stage

IV. CONCLUSION AND FUTURE WORK

In existing research articles, the recommendation of travel destinations is still relevant, but there is a lack of datasets for visited countries, locations, travel photos and objects in them. We designed a fully automated solution that gathered user Instagram photos, detected objects in the photos, and analyzed the item data to improve location accuracy. Automating this process enables us to create a data set of needed data and adjust or discretize its metadata. In the context of the collected dataset, user photos can be analyzed and compared with the records in the dataset, calculating their similarity and membership of the cluster. By combining county data with similar photos, we can build a travel destination recommendation system. As a result of the experiments conducted; it can be concluded that different variation in the model is capable of improving accuracy. However, the most effective result is achieved by using a combination model, which is able to recommend ten countries, which corresponds to 63% of the countries the user visited. We found that accuracy was even higher, on average 96%, when we analyzed how many countries users travelled to in addition to those provided as input for the model. Based on only user photos, this is a promising result to predict travel directions more accurately.

Future enhancements for the Travel Recommendation System using Social Media Profile Images and User Preferences can focus on improving personalization, efficiency, and accuracy. Implementing AI-driven sentiment analysis on user-uploaded images and posts can help determine mood-based recommendations. Augmented Reality (AR) integration can allow users to virtually explore destinations before visiting. Blockchain-based data security can enhance trust by securing user preferences and travel history. Real-time dynamic recommendations using live social media trends and weather conditions can make suggestions more relevant. Voice-enabled AI assistants can improve user experience with hands-free interactions. The system can incorporate multi-modal deep learning, analysing text, images, and past travel behavior for better recommendations.

REFERENCES

[1] U. Gretzel et al., “Tell me who you are and I will tell you where to go: Use of travel personalities in destination recommendation systems,” Information Technology & Tourism, vol. 7, no. 1, pp. pp. 3-12, 2004. DOI: https://doi.org/10.3727/1098305042781129
[2] P. Phorasim and L. Yu “Movies recommendation system using collaborative filtering and k-means,” International Journal of Advanced Computer Research, vol. 7, no. 29, 52, 2017.
[3] Y. H. Hu et al., “Hotel recommendation system based on review and context information: a collaborative filtering approach,” Presented at PACIFIC ASIA CONFERENCE ON INFORMATION SYSTEMS (PACIS), 2016. [Online]. Available: https://core.ac.uk/download/pdf/301369618.pdf
[4] L. Yu et al., “A content-based goods image recommendation system,” Multimedia Tools and Applications, vol. 77, no. 4, pp. 4155-4169, 2018.
[5] A. Felfernig et al., “A short survey of recommendation technologies in travel and tourism,” OEGAI journal, vol 25, no. 7, pp. 17-22, 2007.
[6] Z. Yu et al., “Personalized travel packa
ge with multi-point-of-interest recommendation based on crowdsourced user footprints,” IEEE Transactions on Human-Machine Systems, vol. 46, no. 1, pp. 151-158, 2015.
[7] L. Tang et al., ”Discovering the travel community for POI recommendation on location-based social networks,” Complexity, vol. 2019, pp. 1-9, 2019.
[8] V. Subramaniyaswamy et al., “Intelligent travel recommendation system by mining attributes from the community contributed photos,” Procedure Computer Science, vol. 50, pp. 447-455, 2015.
[9] C. Bin et al., “A travel route recommendation system based on smart phones and the IoT environment,” Wireless Communications and Mobile Computing, vol. 2019, pp. 1-17, 2019.
[10] C. Lu, P. Laublet and M. Stankovic, “Travel attractions recommendation with knowledge graphs,” Presented at European knowledge acquisition workshop, November, 2016. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-319-49004-5_27

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