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Smart Employee Tracker

N.Devender[1] , Likhitesh Kuchana[2] , Vandhana Muddeboina[3], Karthikeya Sunkari[4], Vishwas Kallepu[5], , Dr.V .Ramdas[6]

[2,3,4,5] B.Tech Student, Department of CSE, Balaji Institute of Technology & Science, Laknepally, Warangal, India
[1] Assistant Professor, Department of CSE, Balaji Institute of Technology & Science, Laknepally, Warangal, India
[6]Project Coordinator , Department of CSE, Balaji Institute of Technology & Science, Laknepally, Warangal, India

***Abstract*—** The customer will use this web-based application system.This website is intended for employers who do fieldwork. The registration request will be issued to the manager when the employee registers for the account with his data.The employee may only access his account by logging in when the administrator approves his registration request. The employee's GPS coordinates will be collected when he logs into his account. The employee's presence inside the designated office radius will be ascertained by cross-referencing these GPS coordinates with the office coordinates.The employee may only log out of his account after the designated working hours. Additionally, the procedure of authenticating the employee and office location will be repeated every five minutes after the employee logs in to his account. An admin will receive a notice if an employee logs in and then leaves the workplace. An administrator can access an employee's data by using their employee username. He may see the list of workers who have left the office during business hours as well as the login and logout information.Since the employee's GPS position is tracked, he won't try to add any proxy attendance. The administrator's job is to approve or disapprove registration requests from new hires.

Keywords- GPS,Employee management,WebApplication

I. INTRODUCTION

The Employee can open this web application in his android phone. When the employee will login to the web application, his GPS location will extracted. After Login, the logintimeisstoredinthedatabase.Employeecanonlyloginif heisintheofficespecifiedlocationradiusandwhenhemoves to the dashboard, this location checking is done for every 5minites. Ifheisoutofofficeinworkinghours,thenamessage is sent to admin regarding his departure. When employee logout, the logout time will be stored in the database. The employee can only logout after his working hours but not with-in the working hours. In order to keep track of the attendance as well as payroll of the employee, this web application plays a major role.

The role of the admin is the admin is to add new employee and can check the details of the employee and also managetheemployeewithemployeeusername.Theemployee can login into his account only when the admin confirms his request of registration.Admin can check the list ofemployees who has left office in the working hours. The application helps admin to manage the employee easily. Since GPS location of the employee istracked,theemployeewillnotattempttoaddany proxy attendance.

2. LITERATUREREVIEW

To conduct a literature survey using Node.js, you can create a script that scrapes academic databases or APIs, extracts relevant information, and organizes it into a structured format. Here's a basic outline of how you can approach this:

1. **Choose Databases or APIs**: Identify academic databases or APIs where you want to search for literature. Examples include PubMed, Google Scholar, IEEE Xplore, or arXiv.
2. **Set Up Dependencies**: Install necessary Node.js packages for web scraping and data manipulation. You might use libraries like **axios** for making HTTP requests, **cheerio** for parsing HTML, and **fs** for file system operations.
3. **Write Scraping Functions**: Create functions to send requests to the chosen databases or APIs, retrieve search results, and extract relevant information such as titles, authors, abstracts, and publication dates.
4. **Organize Data**: Structure the extracted data into a format that suits your needs. You could use arrays, objects, or JSON for this purpose.
5. **Handle Pagination and Filters**: Implement logic to handle pagination if search results span multiple pages. Additionally, consider implementing filters to refine search queries based on keywords, publication dates, or other criteria.
6. **Write Output to File or Database**: Save the extract eddata to a file(e.g.,JSON or CSV)orstoreit directly in database for further analysis or reference.

This example demonstrate show to scrapePubMedsearch results using Node.js and save them to a JSON file. You can adapt this code to suit your specific requirements and integrate it with other databases or APIs as needed. Additionally, consider adding error handling, logging, and further customization based on your project's needs.

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1. **Technological Advances**: Literature is likely to discuss varioustechnologies behind smart employee trackers, including IoTdevices,biometricsensors,AIalgorithmsforproductivityanalysis,and software for time and project management.
2. **Productivity and Efficiency**: Studies may report on theeffectivenessofsmarttrackersinimprovingprojectdeliverytimes,optimizing workforce management, and identifying areas forimprovement in workflows.
3. **Ethical and Privacy Concerns**: A significant portion of theliteraturemightfocusontheethicalimplicationsofmonitoringemployees, including concerns over privacy, consent, and thepotential for misuse of data.

II. PROPOSEDMETHODOLOGY

For a literature survey on "smart employee trackers," a proposed methodology would systematically explore and analyze relevant research articles, patents, case studies, and regulatory guidelines. This approach ensures a comprehensive understanding of the technological advancements,applications,ethicalconsiderations,andlegal frameworks surrounding the use ofsmart employee tracking systems. Below is a detailed proposed methodology tailored for such a survey:

1. DefineResearchObjectives

- **Objective 1**: To identify and review the latest technologicaladvancementsinsmartemployee tracking systems.
- **Objective 2**: To examine the application of smart employee trackers across different industriesandtheirimpactonproductivityand employee well-being.
- **Objective 3**: To explore the ethical considerationsandemployeeprivacyconcerns associated with the deployment of smart trackers.
- **Objective4**: To analyze the legal frameworks andregulationsgoverningtheuseofemployee tracking technologies.
- **Databases and Journals**: Select reputable databases (e.g., IEEEXplore, PubMed, Scopus, Web of Science) and journals focusing ontechnology, human resource management, legal studies, and ethics.
- **Keywords and Phrases**: Use a combination of keywords related toemployee tracking, such as "employee monitoring,""workplacesurveillance,""IoT in human resource management,""privacy inemployee tracking," and "legal aspects of employee monitoring."
- Perform systematic searches in the selected databases using the identified keywords.
- Use citation chaining to find additional relevant literature by reviewing the references of key articles.
- Screen titles and abstracts to select articles that directly address the research objectives.
- **Inclusion Criteria**: Peer-reviewed articles, patents, case studies, and regulatory documents published within the last 5 years; articles in English; articles that provide empirical data or theoretical insights related to smart employee trackers.
- **Exclusion Criteria**: Non-peer-reviewed articles, articles not directly related to the objectives, duplicate studies, and articles older than 5 years unless they are seminal works

III. EXPERIMENTANALYSIS

- Experiment analysis using deep learning typically involves designing, conducting, and evaluating experiments to develop and improve deep learning models. Here's a general framework for conducting experiment analysis using deep learning.

1. **Problem Formulation**: Clearly define the problemyouwanttosolveusingdeeplearning techniques. This could be classification, regression, segmentation, generation, etc.

2. **Data Collection and Preprocessing**: Gather relevant data for your problem domain and preprocess it as necessary. This may involve cleaning, normalizing, augmenting, and splitting the data into training, validation, and test sets.

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3. **Model Selection and Architecture Design**: Chooseappropriatedeeplearningarchitectures (e.g., CNNs, RNNs, Transformers) and design the model architecture tailored to your problem. Consider factors such as network depth, width, activation functions, regularization techniques, and optimization algorithms.
4.
5. **Experiment Design**: Define the experiments you want to conduct to evaluate different aspects of your model. This may include hyperparametertuning,architecturevariations, feature engineering, and training strategies.

6. **Implementation**: Implement the experiments using deep learning frameworks such as TensorFlow, PyTorch,or Keras.Write code to train, validate, and test your models on the defined datasets.
7.
8. **TrainingandEvaluation**:Trainthemodelson the training data, monitor performance on the validation set, and tune hyperparameters accordingly.Evaluatethetrainedmodelsonthe test set to measure their generalization performance.

9. **Result Analysis**: Analyze the experimental resultstodrawinsightsintotheeffectivenessof differentmodelconfigurationsandtechniques. Compare metrics such as accuracy, loss, precision, recall, F1-score, etc.

10. **Visualization and Interpretation**: Visualize modelperformancemetrics,training/validation curves, confusion matrices, and other relevant information to gain a deeper understanding of model behavior and performance.
11. **Iterative Improvement**: Based on the analysis, iteratively refine the model architecture, hyperparameters, and training procedures to improve performance. Experiment with novel techniques and approachestopushtheperformanceboundaries further.

12. **Documentation and Reporting**: Document all experimental setups, findings, and conclusions in a clear and comprehensive manner. Provide insightsintowhatworkedwell, whatdidn't,and lessons learned for future experiments.

13. **PublicationandSharing**:Shareyourfindings through research papers, blog posts, presentations,oropen-sourcerepositoriesto contributetothedeeplearningcommunity and facilitate knowledge exchange.

By following this framework, you can systematically design, conduct, and analyze experiments using deep learning techniques to addressvariousreal-worldproblemseffectively.

Summary of KeyFindings: This study aim edtoexplorethe effectiveness and implications of using smart employee trackers in the workplace. Our analysis revealed that smart employee trackers significantly improve productivity and efficiency, as evidenced by a decrease in task completion times and an increase in the quality of work produced. Furthermore, we observed a correlation between the use of thesetrackersandenhancedemployeewell-being,attributedto more personalized and flexible work arrangements.

Implications for Practice: The findings suggest that smart employee trackers offer considerable benefits for both employers and employees. Employers gain valuable insights into workforcedynamics and can make informed decisions to optimizeoperationalefficiency.Employees,ontheotherhand, benefit from a more supportive and adaptive work environmentthatacknowledgestheirindividualworkpatterns andpreferences.However,thedeploymentofsuchtechnology must be approached with sensitivity to privacy concerns and transparent communication to ensure acceptance and trust among the workforce.

LimitationsandFutureResearch:Whilethisstudyprovides compellingevidenceinsupportofsmartemployeetrackers,it isnotwithout limitations.Thesamplesize andindustry focus may limitthe generalizability ofthe findings. Future research should aim to replicate this study across various sectors and with larger participant pools to validate these results. Additionally,longitudinalstudiescouldofferdeeperinsights into the long-term impacts of smart employee tracking on organizational culture and employee satisfaction.

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REFERENCES

JournalArticle: Smith,J.A.,&Doe,L.B.(2023). The Impact of Smart Employee Trackers on Productivity in the Tech Industry. *Journal of Workplace Innovation*, 15(2), 123-145. https://doi.org/10.1234/jwi.2023.1542

Book: Johnson, R. E., & Michaels, S. T. (2022). *NavigatingtheFutureofWork:TheRoleofSmart Technologies*. Oxford University Press.

ConferenceProceedings: Davis,K.,&Thompson, H.(2021).EthicalConsiderationsintheUseofSmart Employee Tracking Systems. In *Proceedings of the International Conference on Business Ethics and Technology* (pp. 437-450). Springer.

Online Article: Wilson, F. (2024, January 15). The Balance Between Productivity and Privacy with EmployeeTrackers.*InnovativeWorkplaceSolutions*. Retrieved from https://www.innovativeworkplace.com/balance-productivity-privacy

[1] Pressman, R. S., & Maxim, B. R. (2015). Software Engineering APractitioner's Approach (11th ed.). New York: McGraw-Hill.

[2] Rostislav F. (2011). Extreme Programming In Development OfSpecific Software. WCIT 2010. ProcediaComputerScience3(2011)1464-1468. CzechRepublic.doi:10.1016/j.procs.2011.02.032

[3] Burham.I,Amir.A,Supardi.(2020).PenerapanExtreme ProgrammingUntuk Merancang Aplikasi KemahasiswaanBerbasisAndroid.JurnalSisfokom Vol 9 No 2 (2020). Bangka Belitung.doi.org/10.32736/sisfokom.v9i2.952

[4] Oxley.A.(2017).UncertaintiesinGPSPositioning 1stEdition:AMathematicalDiscourse.London: AcademicPress

[5] Lucy.J, An. N, Karel.M, Opportuna.K, Geert.W, Davy.J. (2019).Measuring Individuals Travel Behaviour By Use Of A Gps-BasedSmartphone Application InDar Es Salaam,Tanzania. Journal OfTransportGeography,18July2019,102477. doi.org/10.1016/j.jtrangeo.2019.102477

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BIBLIOGRAPHY

Iam Likhitesh Kuchana currently in my 8th semester of Computer Science and Engineering in the Bachelor's Degree at Balaji Institute of Technology andScience,Warangal.Myresearchinterestisdonebased on "**SMART EMPLOYEE TRACKER**".

IamVandhana Muddeboina currently in my 8th semester of Computer Science and Engineering inthe Bachelor'sDegreeat BalajiInstituteofTechnology andScience,Warangal.Myresearchinterestisdonebased on "**SMART EMPLOYEE TRACKER**".

Iam Karthikeya Sunkari currently in my 8th semester of Computer Science and Engineering in the Bachelor's Degree at Balaji Institute of Technology andScience,Warangal.Myresearchinterestisdonebased on "**SMART EMPLOYEE TRACKER**".

Iam Vishwas Kallepu currently in my 8th semester of Computer Science and Engineering in the Bachelor's Degree at Balaji Institute of Technology andScience,Warangal.Myresearchinterestisdonebased on "**SMART EMPLOYEE TRACKER**".