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Expense Tracker and College Placement Report

Himanshi Shrimali[1], Shipra Sharma[2], Dr. Mayank Patel[3]
[1]*UG Student,* [2]*Assisstant Professor,* [3]*Professor & Head, Department of Computer Science & Engineering, Geetanjali Institute of Technical Studies Udaipur, Rajasthan 313001, India*

Abstract: ***Growth in the field of automation and artificial intelligence has led to several innovations in the present-day world. By embracing responsibility for all the changes innovation can bring, the technical industry can be an important aspect for driving future progress. In any organization, it is important to keep the track of expenses which are raised and entered by the employees. These expenses include on-site visit, travel expense, food, and other related utilities. To maintain this track of records, an automated Expense Tracker System is designed that works online over a wide range of network.***
In reference to artificial intelligence, there are several ways of analyzing and predicting the future outcomes of numerous business and industries, their sales, profit, loss etc. Data Analytics serves as an integral part of observing and tracking the maximum relevance from the available data source. From small to wide range of organizations, business sectors and industries, it is extensively useful to measure the performance with the course of time. With the use of Power BI, which is of one of the most advanced tool of data analytics, the College Placement Report for the CSE department is designed. This report covers each detail of the students being placed each year and provides a better way of analyzing the ratio of placement being made year by year on an organizational level.
Keywords: BI (Business Intelligence), Data Analytics, Automated, Integral, Predicting

I. INTRODUCTION

One of the most important and widely used technology is Automation. With the use of automated systems, various processes can be made to work seamlessly in parallel to each other without much human interference. In order to validate the expenses being entered by the employees of any company or organization, an Expense tracker is designed. This will fasten up the process of entering the expenses as well as reimbursement being made accordingly.
Another advanced technology which is extensively used in the field of Business Intelligence (BI), has paved a way of introducing many new opportunities to predict and handle the intelligence-based systems. It is a collection of technology that excel at extracting insights and patterns from large data sources, followed by making useful predictions based on that information. It includes the data analytics from several places like Google Analytics, automation platforms, content management systems, CRMs and many more. In fact, AI exists today that can help you get much more value out of the data you already have, unify that data, and make predictions about customer behaviors based on it.

II. OBJECTIVE

A. Objective of Expense Tracker

The main objective of Expense tracker System is to track the expenses within a company in order to create financial awareness. If you do not know where your money goes or how you spend it, you will not know what habits you can change in order to make your money work for you. The same idea works for the company as well. With the introduction of Expense Tracker System, the employees can easily enter and submit their organizational level expenses on the online portal which will be further approved by the authorities within a company. This will further include the section where individual employee can see the details of his/her expenses entered so far. Once the expense is submitted, it will be entered in the bucket list for further approval. Each detail related to the expense can be filled along with the description of it. This system helps to keep the record of the expenses being raised annually, which further adds on in the end of every financial year. It is being build up by using SharePoint technology. This system also supports the feature of portability as one can access its mobile layout feature. With the help of SharePoint technology, the mobile layout feature is customized to help users access it other than remote desktop.
Expense Tracker refers to the systems deployed by a business to process, pay, and audit employee-initiated expenses. It is a comparatively fast process for making the request come into play. Since the system is automated, it starts working once the workflow is triggered. Apart from individual perspective, it plays a major role in the audits carried out at wider level. As the expenses being entered requires timely reimbursement, it is necessary to have records for each expense along with the description and date of submission.

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For any company, profitability and financial performance measures are quite important. It allows the not for profit to achieve its goals if it brings in enough resources in order to engage in the activities for which it charges itself. So, it is important to look into the spend being given for the expenses and how the entire process is being monitored on regular basis. Using an automated system is more scalable and robust in handling large amount of entries. It greatly reduces manual entry, therefore decreasing the chances of human error from occurring.

B. Objectives of Placement Report

Most organizations today are working on automated systems and machinery. In order to enhance it to one step further, Artificial Intelligence (AI) serves as the best way to make the automation process come into play. Since placements plays an important role in student's courier as well as for the growth of any academic organization. It is important to monitor the overall academic performance of the student which can be analyzed using analytics tool. With the use of Power BI, it becomes much easier for the faculties to monitor the placements being taken by each student along with getting to know about the number of companies offering placements each year. This report also covers the details of the companies approaching year by year and keeps the records of increase and decrease in the number of placed students taken by each company in the last five years. Along with it, it also acts as an eye opener for the students who want to flourish their courier in their field of interest. Since it is important for any college or university to observe and understand its progress at the completion of every academic year, it simplifies how to analyze and share large volumes of data. It becomes easier and more impactful to have a glance at the academic performance in form of rich personalized dashboards. To serve the purpose, this tool is incredibly powerful for both modelling and visualizing data. It has the same base as Power Query. So, the one having experience with M or DAX can work on it in a better way.

There are several ways of representing the same data set. But it is important to know what can serve the best in relevance with the existing information. Designing the CSE Placement Report using Power BI serves the best for what all the information one demands at the user end. With multiple ways of handling the data, it has great visual impact. It is capable of handling most of the analytics pipeline. Beginning from ingesting and modelling data to presenting it as dashboard and sharing the dashboard with relevant people, this works seamlessly. The Report contains various visualization, each representing different set of information in the best possible way. With the UI/UX perspective, some good combination of colors is taken to make the report more looker active. In context with the functionality of the report, there are certain dropdown menus provided in the report, in which the user can select an option and filter the entire report based on that data.

The report is designed keeping in mind the simplicity of user understandability. It features various kinds of powerful and impactful visuals that categorize the data set in variant types. Each representation holds a separate and unique meaning, in turn making the report a diverse collection of information.

III. PROBLEM STATEMENT

The problem faced before the development of Expense Tracker System was that there was no uniformity in the existing ways of keeping the track of records. The Existing system is paper based, time consuming, monotonous, less flexible and provides a very uneasy way of working. The chance of loss of expense records is high and maintaining them for future reference is difficult.

Result Processing is slow due to paperwork and requirement of staff. As the manual work is more, it becomes inefficient to work with documented papers. To solve these problems, they required an automated computerized system to handle all the expense related work.

Discussing about the problem being faced before the College Placement Report was created with the use of data analytics techniques, there are certain domains which were unrecognized about the existing data set present. There were several aspects and observations which could be made out of this set of data, but due to lack of any tool and system, there was no proper and direct way of analyzing the placements being made overs past few years in a particular department. Due to this, it was difficult to calculate and derive the number of placements being made in past to the number estimated for the future reference.

IV. PROPOSED SYSTEM

A. Expense Tracker System

Since manually processing each request is acceptable if there are only handful of employees submitting them every month. However, this method becomes impractical when submissions start exceeding the hundred or thousand mark. In MNCs, such systems make it easier for the accounting department to look at the policies and check whether the employee has filed the request correctly.

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As discussed in the earlier section, the employees can enter the expense online on this page.



Fig. 1: Showing the Expense Requests Initiation Form

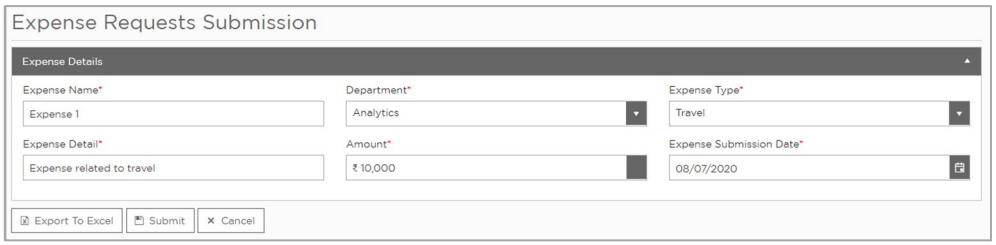


Fig. 2: Showing the Expense Requests Submission Form

1) Once the expense is submitted by Team Member, it will be approved at further stages.
2) At first, the expense so submitted needs to be approved by Team Leader where the status will be changed into 'Team Leader Review.'
3) Further, the request will be forwarded to Team Manager for approval and finally the Finance Head will approve the request.
4) After the approval of the expense record, the status on the grid will be changed to 'Request Approved.'
5) The request can be rejected by either of the users including team leader, team manager and finance head.
6) In case the expense record gets rejected, the status will be changed to Rejected.
7) All the expense records being entered and submitted will be displayed in the grid.
8) The user can filter the expenses on the basis username as well as expense name.
9) Export to Excel functionality is also provided to generate the excel sheet containing all the details of the expense entered at every stage.
10) The user can also view the list of expense records being entered so far along with their status in form of the grid From this grid, the user can also filter the particular request by selecting expense from the drop-down filter.

B. College Placement Report

The College Placement Report is being designed with the use of Power BI, which is one of the most advanced tools of Data Analytics and Business Intelligence. There are certain domains which were unrecognized about the existing data set present. There were several aspects and observations which could be made out of this set of data, but due to lack of any tool and system, there was no proper and direct way of analyzing the placements being made overs past few years in a particular department.

Due to this, it was difficult to calculate and derive the number of placements being made in past to the number estimated for the future reference. To resolve such issues and estimate the number of companies offering recruitments in various domains, CSE Placement Report is designed using Power BI. The visualization involves Expand/Collapse icon in the matrix, giving a pivot table like experience. Color/size of these icons can be further formatted. There is a lot of formatting options. E.g. visual title can be changed and formatted, one can add a border and background to the visual, etc. Feel free to explore the options. DAX can also be used to define custom calculations for Calculated Columns and for Measures (also known as calculated fields).

DAX includes some of the functions used in Excel formulas, and additional functions designed to work with relational data and perform dynamic aggregation. Microsoft Power BI is a business intelligence platform that provides nontechnical business users with tools for aggregating, analyzing, visualizing, and sharing data.

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One can use Power BI on-premises gateway to keep the data fresh by connecting to the on-premises data sources without the need to move the data. It allows to query large data sets and benefit from the existing investments. With the help of Microsoft Power BI, which contains invariably large amounts of visualizations and services that make it compatible enough to handle any kind of data. This enables us to create and share interactive data visualizations across global datacenters, including national clouds to meet individual compliance and regulation needs.

The following snippet shows the Placement Report for the CSE Department.

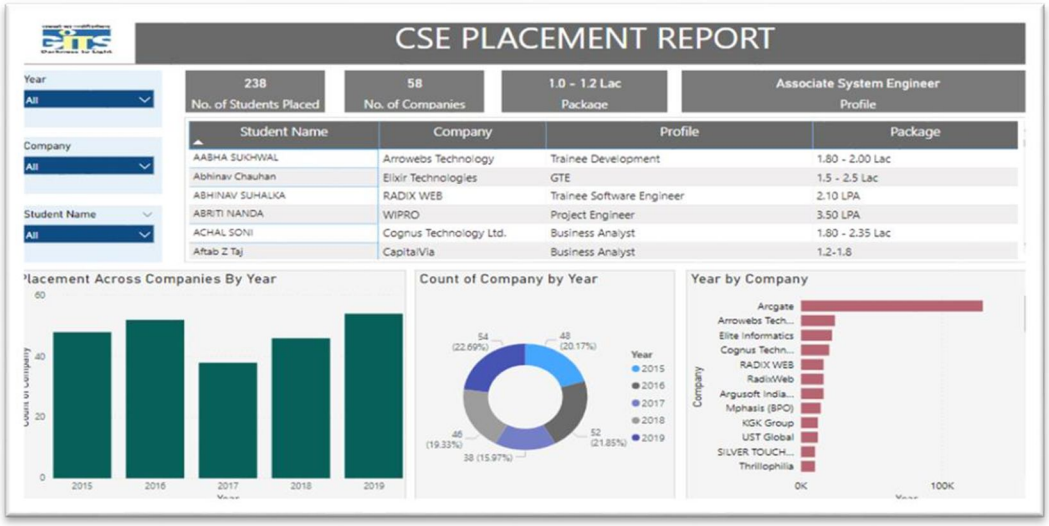


Fig. 3: Showing the overview of Placement Report

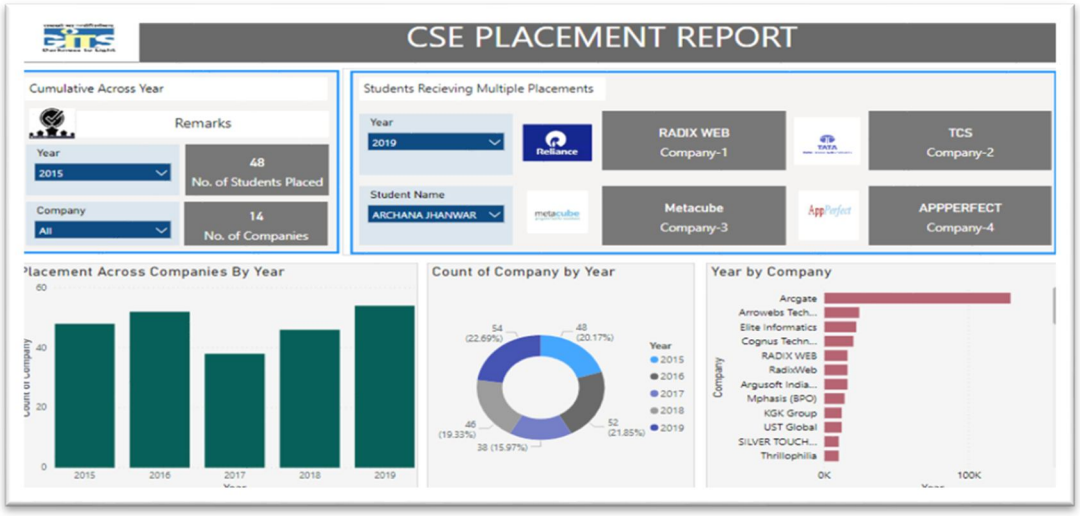


Fig. 4: Showing the detailed representation of Placement Report

V. CONCLUSION

In contrast with the existing systems which required more of manual work, it is easier to work with the automated expense tracker system which allows us to use technology in a smarter and more efficient way. The placement report also helps the college and department including students and faculties to know and understand the observations being made with the existing set of data. This information builds a wider knowledge for future placement reference.

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REFERENCES

[1] Power BI Desktop:
- https://powerbi.microsoft.com/en-us/get-started/
- https://www.tutorialspoint.com/power_bi/index.htm
- https://www.tutorialgateway.org/power-bi-tutorial/

[2] Power BI Online:
- https://powerbi.microsoft.com/en-us/integrations/web/

[3] Power BI Queries:
- https://docs.microsoft.com/en-us/power-bi/guided-learning/introductiontodax

[4] SharePoint:
- https://support.office.com/en-us/article/what-is-sharepoint-97b915e6-651b-43b2-827d-fb25777f446f

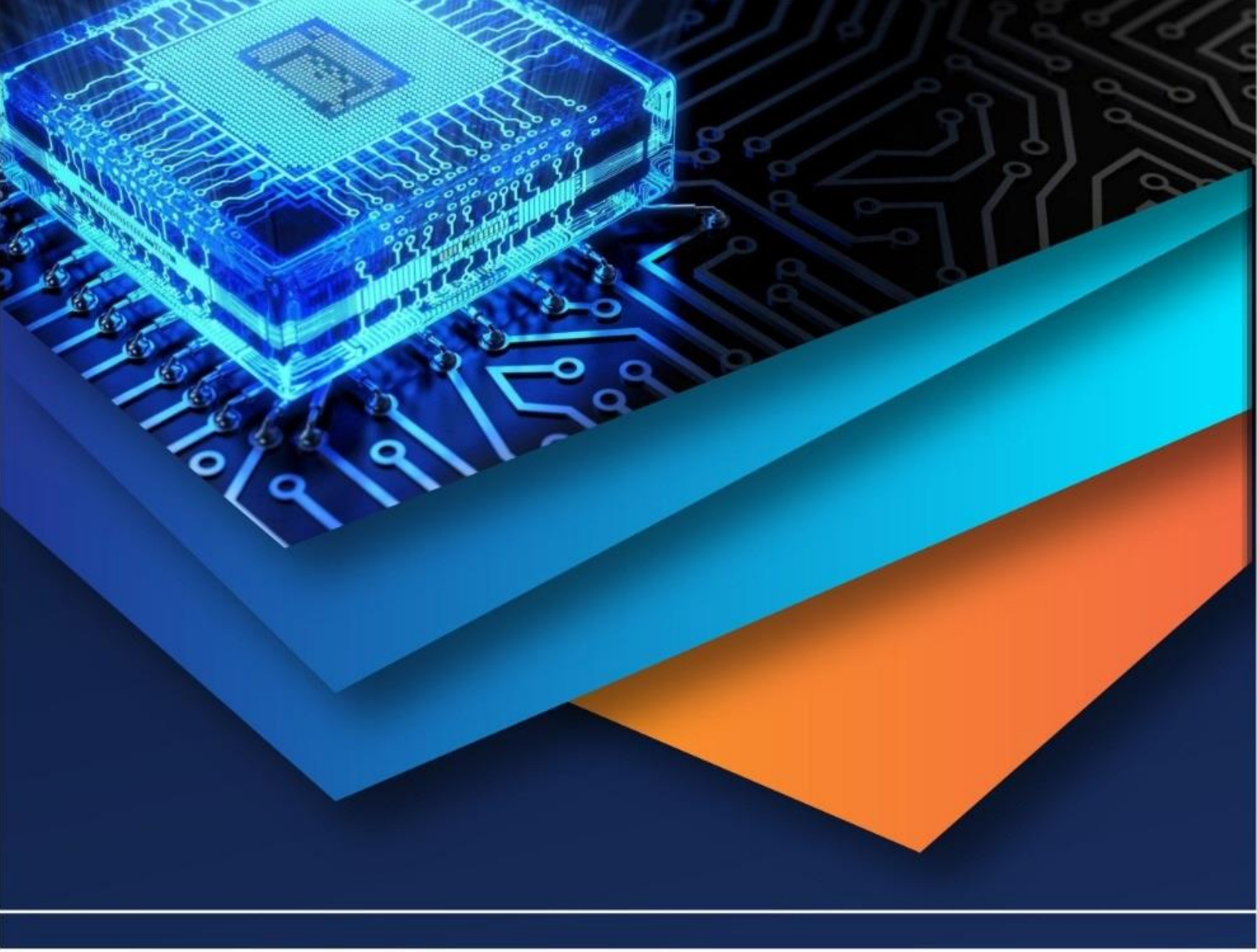
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