



Short Paper\*

# Web Platform Lead Management System for NEAC Medical Exam Application Center with Data Analytics

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## ABSTRACT

*Purpose* – This project introduces a tailored Web-based Lead Management System (LMS) for the NEAC Medical Exams Application Center, designed to enhance lead capture, monitoring, and conversion. Features include seamless data capture, centralized storage,



personalized communication tools, and advanced analytics, empowering teams to optimize strategies for maximum efficacy.

*Method* – Utilizing advanced web technologies and responsive design, the LMS offers a user-friendly interface with real-time data management, robust security measures including data encryption, and informative dashboards for detailed lead analysis.

*Results* – Initial results show the LMS significantly boosts lead conversion rates and operational efficiency at NEAC. Real-time analytics allow for alignment with market trends and improved lead management strategies, enhancing overall sales success.

*Conclusion* – The LMS has transformed NEAC’s lead management processes, integrating smoothly with existing IT infrastructure and enhancing operational efficiency through automated features and detailed analytics. Initial feedback praises its intuitive design and effective lead quality assessment, fostering better team collaboration.

*Recommendations* – Future enhancements could include deeper analytics, artificial intelligence for lead scoring, and expanded marketing functionalities, aiming to strengthen the LMS’s value to NEAC and its scalability across various organizational contexts.

*Research Implications* – The LMS marks a significant improvement in NEAC's lead management, contributing to higher sales and better customer relationships, showcasing the impact of online systems in streamlining business operations.

*Keywords* – lead management system, data analytics, web-based application, user-centric design, performance analytics

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## INTRODUCTION

An effective lead management system is one of the core principles of any successful business. In an era where digital interactions and data-driven decision-making define the business environment, companies are tasked with the challenge of not only capturing leads but also meticulously tracking their status in the lead and converting them into loyal customers. This complex process requires more than manual record-keeping; it also demands an adaptable, technology-driven approach that ensures leads are effectively managed, prioritized, and engaged.

NEAC receives thousands of fresh leads through various digital platforms, including in-house inquiries each month. Despite being a dependable tool for NEAC's database over the years, traditional and manual platforms such as Google and Excel spreadsheets still lack automated features and often entail extensive manual labor that involves tedious report

extraction that typically requires 8 to 16 hours to complete, consuming valuable time and resources to generate the lead list, sales numbers, employee performance, and other related reports. Simultaneously, the complicated and extensive process of using traditional and manual platforms hinders fast decision-making and increases the likelihood of mistakes and inaccuracies in generating reports. Also, the delay in report generation may make it difficult for the sales team to recognize and reinforce ideal practices on time. Sales representatives need prompt feedback and help to continuously improve their methods and get the best outcomes, whether they are doing well or having difficulties. Delayed insights into top performers also impact the morale and motivation of the sales team.

## **LITERATURE REVIEW**

### ***Foreign Literature Lead Management System***

To increase the success of customer conversion, this literature study recommends using data mining approaches to optimize lead management procedures from capture to conversion. A case study was carried out in a telecom firm to enhance efficiency in each of the several lead management maturity stages. The literature places a strong emphasis on using data mining methods to maximize lead management. Similarly, data mining tools can be integrated into web-platform lead management systems to examine lead behavior, forecast possible conversions, and customize marketing tactics for maximum impact (Espadinha-Cruz, 2021)

Investigated creating a solution for centrally storing customer data and creating a Web platform lead management tool to handle clients more effectively. Oracle and ColdFusion were used to create the application. The literature's emphasis on creating an application for web platforms for lead management aligns with the main goals of a more comprehensive web platform lead management system. Both aim to use suitable technological stacks, integrate apps, optimize customer/lead management, consolidate data, and manage data efficiently (Darschewski, 2006).

Investigated the goal of determining the connections between digital transformation and agility. The study validates the significance of a digital mindset, adaptable and nimble organizational structure, and broad digital competencies for digital transformation. Strong IT infrastructures are essential for companies to manage the enormous amounts of data that are regularly collected both offline and online. This study thoroughly explains how IT systems enable businesses to manage real-time data streams, swiftly interact with their surroundings, and adjust as necessary. In the context of digital transformation, the literature highlights the necessity of a digital mentality, adaptable organizational structures, and strong IT infrastructure. These guidelines significantly impact web platform lead management since they highlight the value of implementing

digital strategies, handling leads adaptably, utilizing cutting-edge IT systems for effective data administration, and engaging with potential leads in real time (Giacosa et al., 2022).

Three viewpoints were examined while examining the role of marketing in lead generation and nurturing: management, information systems, and marketing. According to the survey, businesses spend money on technology to improve lead nurturing and generation. to aid executive managers in making strategic choices. The research highlights technology is important to lead generation and nurturing, particularly online platform lead management systems. In line with the study's findings, a web platform lead management system is presented as a key instrument that effectively incorporates technology to facilitate strategic decision-making, improve productivity, and promote effective lead management procedures inside a company (Niemi, 2017).

### ***Local Literature Lead Management System in the Philippines***

Created a framework of online inquiry services for the De La Salle University-Dasmarias faculty development cooperative. Faculty members at the institution would be able to keep an eye on their accounts without having to visit the faculty cooperative office thanks to the built online inquiry services system. Data security is ensured using a username and password. This gives easy monitoring of faculty accounts compared to the manual system that the faculty needs to go to the office of the cooperatives from time to time. The development of the Online Inquiry Services System for faculty accounts demonstrates the advantages of leveraging online systems for streamlined monitoring and improved security. These advantages translate well to a web platform lead management system, aligning with the goals of enhanced efficiency, security, user-friendliness, centralization, and automation (Erquita, 2008).

Studied developing a web-based project scheduling and decision support system. This insight provides an accurate measurement of the team's capacity and allows you to manage your resources to distribute the tasks evenly. This study replaced the manual way of measuring the capacity and utilization of the resources by tracking and logging the hours spent in Microsoft Excel. The study's focus on automating processes, ensuring accurate measurement, efficient resource management, effective data tracking, and centralization of data aligns with the core objectives of a web platform lead management system. By leveraging the success and lessons of the Web platform Project Scheduling and Decision Support System, a web platform lead management system can be developed to optimize lead handling and enhance overall operational effectiveness (Lopez, 2019)

Studied to build system-based incident management for DZ Card (Philippines) Inc. The system aims to have a centralized filing of incident reports, tracking of unresolved incidents, trending analysis of top incidents, reporting generation of incidents for internal and external information, and to serve as a database and record keeping of the filed

incidents for future use. The study on incident management for DZ Card Inc. offers a valuable framework and set of functionalities that can be adapted and applied in the context of a web platform lead management system. The essence of centralization, analysis, reporting, and systematic record-keeping is vital in both scenarios, showcasing the interconnectedness and the potential for utilizing successful methodologies across various organizational domains (Corpuz, 2019).

Used PHP, Xampp Server, and MySQL to develop a company's Intelligent web servicing system. It changes the way it handles services and lessens human errors. The literature emphasizes adopting an intelligent and technology-driven approach to improve service handling. This resonates with the objectives of a web platform lead management system - utilizing technology to streamline lead processes, minimize errors, and ultimately optimize business outcomes. Drawing from the success and lessons of the intelligent web servicing system, a web platform lead management system can be developed with a focus on intelligence, efficiency, and effective utilization of data (Lalata, 2018).

## METHODOLOGY

The study employed a standardized ISO questionnaire following the Software Product Quality standards, also referred to as ISO/IEC 25010. Two specialized systems for international standardization are the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO). The system quality model described in ISO/IEC 25010 has eight quality attributes: functional appropriateness, performance efficiency, compatibility, usability, dependability, security, maintainability, and portability. It provides a current situation for identifying the implementation's benefits, challenges, and critical success factors.

### *System Methodology*

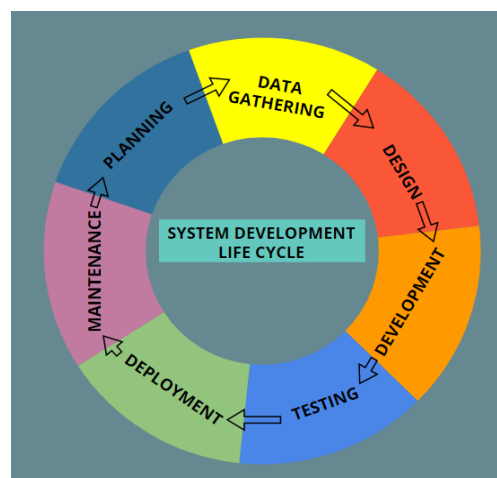


Figure 1. System Development Life Cycle

The proof-of-concept development and project implementation are also explained. The project's timeline and data collection techniques are also thoroughly described. System Development Life Cycle Phases (SDLC) are used by the researcher, and the phases are defined as a conceptual model that includes the processes and guidelines needed to create or alter a system during its life cycle using scrum methodology. The final result should be a top-notch system that stays on schedule, within budget and meets or surpasses the beneficiary's expectations.

**Planning:** In the planning stage, the researcher created the scope, schedule, and cost of the proposed capstone project and also created the timeline of the proposed capstone project. At this stage, the researcher also prepared all the necessary questions that can be used by the respondent for the researcher to understand the problem of the beneficiary

**Data Gathering:** Four respondents—the licensing manager, two supervisors, and one salesperson—were interviewed for an hour by the researcher to gain insight into their current circumstances and the system they use daily. The interview provides the researcher with a summary and understanding of the respondents' current circumstances and issues.

**Design:** A proof-of-concept (POC) design implementation of data distribution will be conducted for the proposed study. The design of the code and data for this proposed capstone project won't be too difficult. Additionally, this system's entire data set will be deployed onto a cloud-based architecture.

**Development:** The Laravel programming language can be used to implement the suggested design. The web platform software for the suggested capstone research can be accessed by using a browser. The researcher used MySQL to store all of the data in the database, and both the development team and operations need to be trained in its use.

**Testing:** Every aspect of the system's operation needs to be looked at. Any adjustments that are required now must be made. Before releasing them to production, quality assurance (QA) teams can mimic deployment plans in a staging environment. Following this, system operations can carry out tests like systems integration and system testing in a QA environment.

**Deployment:** A real-world environment will be used to test the proposed capstone project implementation system. We can use the framework for service reliability engineering to apply all industry best practices.

**Maintenance:** After the system is installed, maintenance is the process of making changes and updates to it. A hotfix should be implemented if something goes wrong during

the deployment process that the team was unable to identify during testing before deployment. Monitoring service availability and system operations and maintenance are also included in this.

### Software Development Tool

The renowned open-source PHP web framework Laravel, which is usually used for web application development, will be used to build the suggested capstone project. The web platform application for the proposed capstone research can be accessed through a range of web browsers. The database for the system, MySQL, will be stored in the cloud.

### System Workflow Diagram

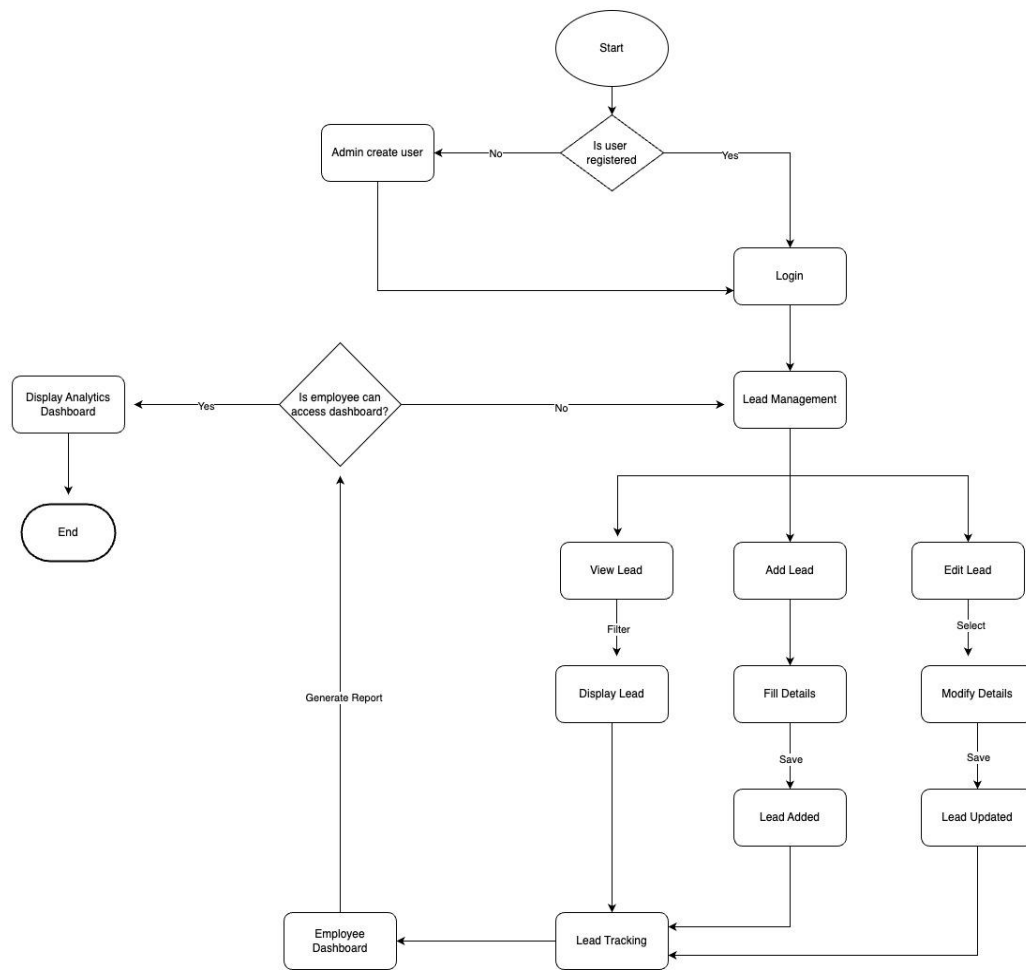


Figure 2. System Workflow

The system workflow model explains and summarizes the flow and the concept of the proposed project study (Figure 2). It shows how users can interact with the system starting from the login process, which requires the user to input their username and

password provided by the administrator. It demonstrates how users can view, add, and modify lead data on the system. The system processes the data for lead tracking and generates analytics and an employee report that gives valuable insight to management by viewing the home dashboard.

## RESULTS

Preliminary findings indicate that the LMS has notably enhanced lead conversion rates and operational efficiency at NEAC. The system's real-time analytics support data-driven decisions, aligning sales strategies with market trends and customer behaviors, which has led to improved lead prioritization and follow-up strategies. This positive impact on NEAC's lead management processes, coupled with high levels of user satisfaction and system acceptance, underscores the LMS's potential to drive sales success and operational improvements.

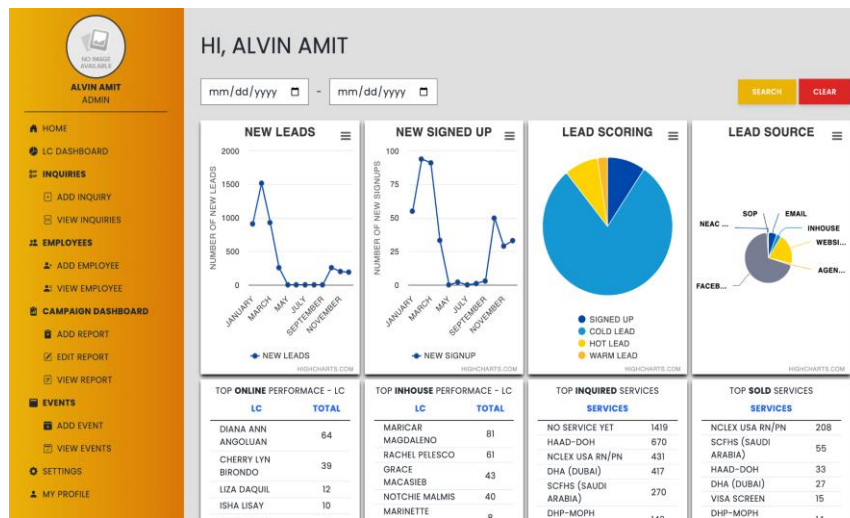


Figure 3. Dashboard

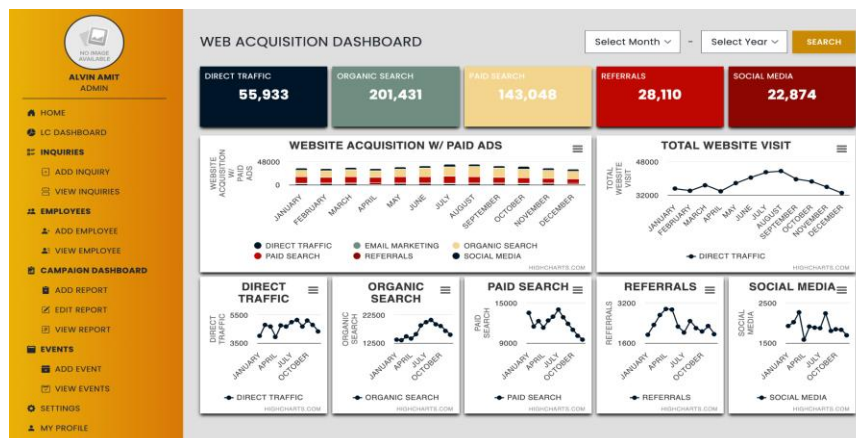


Figure 4. Campaign dashboard



## **DISCUSSION**

When we investigated how NEAC Company started using a new online system for managing customer leads, we saw some big changes. This system made everything clearer and more organized, turning a confusing mix of customer info into something easy to handle. Thanks to being online, it lets NEAC work with customer info on any device, anywhere, and it's designed to be easy for anyone at NEAC to start using it quickly.

However, there are a couple of things to keep an eye on. The system needs to be online all the time, and it must have correct information put into it. If the internet is down or if wrong info is entered, it could cause problems. This means NEAC might need to think about ways to keep the system working even when there's no internet or to make sure the information stays accurate.

## **CONCLUSIONS AND RECOMMENDATIONS**

This capstone project's contribution to the field of information technology is twofold: it demonstrates the practical application of IT solutions in solving complex business problems, such as lead management, and it contributes to the academic and professional discourse on the strategic role of IT in driving business innovation and efficiency. The project's outcomes and insights underscore the potential for broader application of similar systems across industries, paving the way for future research and development in the realm of enterprise information systems and customer relationship management.

## **IMPLICATIONS**

For NEAC and other companies thinking about using a similar system, it's important to make sure the information is right and that there's a good internet connection. Looking forward, adding new tech like artificial intelligence could make the system even better at figuring out which leads to focus. This could help NEAC, and others get even more out of their lead management systems.

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## **DECLARATIONS**

### ***Conflict of Interest***

The researcher declares no conflict of interest in this study.

### ***Informed Consent***

Not applicable

### ***Ethics Approval***

Not applicable

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## Author's Biography



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Student at Adamson University and is currently taking a master's in information technology (MIT). He is currently employed in NEAC as an IT Project Manager, with seven years of IT experience and expertise in Digital Marketing. He is Also, active in sports such as running, trailing, and dragon boat. He has multiple certifications in Web Development, Web Application, and mobile application.



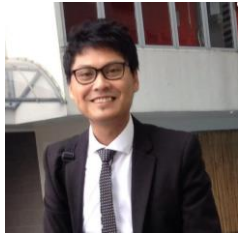
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