Internship Report

Internship at InnerCord

Submitted in partial fulfillment for award of

BACHELOR OF TECHNOLOGY

Degree

In

COMPUTER SCIENCE & ENGINEERING

2023-24

Under the Guidance of: **Submitted By:**
Mr. Sanjay   Chirag Singhal (200033010084)
Srivastava

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY

5th K.M. STONE DELHI-MEERUT ROAD, GHAZIABAD

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow

November 2023

Declaration

This is to certify that the Intership Report Entitled "Internship at InnerCord" which is being submitted in partial fulfillment of the requirement for the award of degree B. Tech in Computer Science and Engineering to RKGIT, Ghaziabad (Dr. A.P.J. Abdul Kalam Technical University, Lucknow) comprises only original work and studies carried out by the students themselves. The matter embodied in this work has not been submitted for the award of any other degree.

Date: Chirag Singhal

                                                                                               (2000330100084)

Vision and Mission of the Institute

3.1. Vision of the Institute

To continually develop excellent professionals capable of providing sustainable solutions to challenging problems in their fields and prove responsible global citizens.

3.2. Mission of the Institute

We wish to serve the nation by becoming a reputed deemed university for providing value-based professional education.

3.3. Vision of the Department

To be recognized globally for delivering high-quality education in the ever-changing field of computer science & engineering, both of value & relevance to the communities we serve.

3.4. Mission of the Department

1. To provide quality education in both the theoretical and applied foundations of Computer Science and train students to effectively apply this education to solve real-world problems.

2. To amplify their potential for lifelong high-quality careers and give them a competitive advantage in the challenging global work environment.

3.5. Program Educational Outcomes (PEOs)

1. PEO 1: **Learning:** Our graduates to be competent with sound knowledge in the field of Computer Science & Engineering.

2. PEO 2: **Employable:** To develop the ability among students to synthesize data and technical concepts for application to software product design for successful careers that meet the needs of Indian and multinational companies.

3. PEO 3: **Innovative:** To develop research-oriented analytical ability among students to prepare them for making technical contributions to society.

4. PEO 4: **Entrepreneur/Contribution:** To develop excellent leadership quality among students which they can use at different levels according to their experience and contribute to progress and development in society.

3.6. Program Outcomes (POs)

Engineering Graduates will be able to:

1. PO1: **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. PO2: **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using the first principles of mathematics, natural sciences, and engineering sciences.

3. PO3: **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety and the cultural, societal, and environmental considerations.

4. PO4: **Conduct investigations of complex problems:** Use research-based knowledge and research methods, including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

5. PO5: **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and

modeling, to complex engineering activities with an understanding of the limitations.

6. PO6: **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to professional engineering practice.

7. PO7: **Environment and sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for, sustainable development.

8. PO8: **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

9. PO9: **Individual and team work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.

10. PO10: **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. PO11: **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. PO12: **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

3.7. Program Specific Outcomes (PSOs)

1. PSO1: **The ability to use standard practices and a suitable programming environment to develop software solutions.**

2. PSO2: **The ability to employ the latest computer languages and platforms in creating innovative career opportunities.**

Table 1: Objective and Description

Objective	Description
C407.1	Relate to the 'real' working environment and get acquainted with the organization structure, business operations, and administrative functions.
C407.2	Practice hands-on experience in the computer-related fields so that they can relate and reinforce what has been taught.
C407.3	Develop synergetic collaboration with industry and the university in promoting a knowledgeable society.
C407.4	Set up the stage for future recruitment by potential employers.

Table 2: Objective and PO

Internship

Objectives	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		
C407.1	3	3	2	1	1	1	1	1	2	1	2	2	3	2
C407.2	3	3	2	1	2	1	1	1	2	1	1	2	3	3
C407.3	3	3	1	1	2	1	1	1	2	1	1	2	2	1
C407.4	3	3	1	1	2	1	1	1	1	1	1	2	2	1

Internship Assessment (KCS-752) (CS, VII SEM)

Internship Objectives	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
C407	3	3	1.5	1	1.75	1	1	1	1.75	1	1.25	2	2.5	1.75

Raj Kumar Goel Institute of Technology Ghaziabad

ISO 9001:2015 Certified

5th KM. STONE, DELHI-MEERUT ROAD, GHAZIABAD (U.P)-201003

Department of Computer Science & Engineering

Abstract

This internship report documents a comprehensive and transformative learning experience during my internship at InnerCord—a platform specializing in Ayurveda, Vedic Astrology, Yoga, Mindfulness, and Meditation. The report encapsulates diverse responsibilities, including MEAN stack web development, Streamlit-based data analysis, and Webflow integration. Skills acquired range from proficiency in MongoDB, Express, Angular, Node.js, Bootstrap to deploying on Heroku. MongoDB served as a reliable database, while Express and Node.js ensured robust API functionality. Angular facilitated dynamic interfaces, and deploying on Heroku demonstrated the scalability of MEAN stack applications. The Streamlit error analyzer project applied data analysis to provide actionable insights into error patterns and system performance. This real-world application enhanced decision-making within InnerCord, showcasing the significance of dynamic data visualization. Integrating Webflow into InnerCord's website demonstrated the practical use of design tools in a professional setting. The real-time impact on user engagement highlighted the significance of such integrations in the competitive online landscape. Emphasizing effective team collaboration and agile methodologies showcased their real-world applicability. Tools like Slack and Trello facilitated real-time collaboration, while Scrum and Kanban methodologies effectively managed project workflows. Emphasis is placed on collaboration within an agile team, effective communication, and application of industry best practices. The report concludes with reflections on personal growth, collaboration, and anticipation of leveraging gained skills in future projects. This narrative serves as a testament to the dynamic interplay between technology, personal development, and the ever-evolving landscape of web development.

Table of Contents

Contents

List of Figures

Copy of Certificate

Introduction

The internship at InnerCord marked a transformative phase in the exploration of technology within a dynamic, forward-thinking company. InnerCord, a tech-driven entity, embodies innovation in the development of a sophisticated web application. This introduction aims to provide an insightful overview of the internship, emphasizing InnerCord's status as a technology-focused enterprise and the myriad technological skills acquired during the tenure.

InnerCord, led by wellness and tech expert Ekta Bhasin, is positioned at the nexus of technology and holistic well-being. The company's commitment to creating a sustainable balance between healthy living and technological advancements is evident in its emphasis on transformative learning. As an intern, my primary focus was on contributing to the development of the InnerCord web application, utilizing the MEAN stack — MongoDB, Express, Angular, and Node.js. This immersion provided a hands-on understanding of cutting-edge technologies that power modern web applications.

The internship encapsulated an array of responsibilities, ranging from designing the user interface using Angular, HTML, CSS, and Bootstrap to developing a robust RESTful API with Express and Node.js. Integration with MongoDB, facilitated by the Mongoose library, ensured seamless data storage and retrieval. Rigorous testing and debugging practices, coupled with deployment to Heroku, provided real-world insights into maintaining high-quality and reliable web applications.

Beyond web development, the internship featured engagement in Streamlit for data analysis, enhancing proficiency in visualizing complex data and creating user-friendly interfaces. Additionally, collaboration with Webflow for website enhancement underscored the diversity of skills cultivated, extending beyond core development tasks.

Problem Statement and Solution Approach

9.1. Problem Statement

The internship at InnerCord presented a compelling opportunity to address key challenges in the development and enhancement of their web application. The primary challenges included:

9.1.1. User Interface Design and Engagement

The existing InnerCord web application required an overhaul in terms of user interface design to enhance engagement and provide a seamless experience. The challenge was to create an interface that aligns with InnerCord's vision of simplicity, interactivity, and user-friendly navigation.

9.1.2. Data Analysis and Visualization

InnerCord sought to augment its data analysis capabilities by developing a streamlined error analyzer using Streamlit. This involved the effective extraction, analysis, and visualization of data to provide valuable insights for continuous improvement.

9.1.3. Website Enhancement

The integration of Webflow into the company's website aimed at elevating its design and functionality. This presented the challenge of seamlessly incorporating Webflow features while maintaining consistency with InnerCord's brand identity.

9.1.4. Collaboration and Team Dynamics

Ensuring effective collaboration within the development team was a recurring challenge. The internship provided an opportunity to address communication gaps and refine team dynamics to optimize productivity.

9.2. Solution Approach

9.2.1. User Interface Design and Engagement

The solution approach for enhancing user interface design involved a systematic process:

- **Analysis:** Conducted a thorough analysis of user feedback and industry best practices to identify areas for improvement.

- **Design Principles:** Applied design principles, leveraging Angular, HTML, CSS, and Bootstrap, to create a visually appealing and user-friendly interface.

- **User Testing:** Implemented iterative design changes based on continuous user testing and feedback to ensure the final interface aligns with user expectations.

9.2.2. Data Analysis and Visualization

Developing the Streamlit error analyzer required a strategic approach to data analysis and visualization:

- **Data Extraction:** Utilized Python and Streamlit to extract and preprocess relevant data for analysis.

- **Visualization Techniques:** Employed effective data visualization techniques to present complex information in a clear and comprehensible manner.

- **User Interaction:** Integrated interactive elements to allow users to explore data dynamically, fostering a more engaging and informative experience.

9.2.3. Website Enhancement

The integration of Webflow into the company's website involved a step-by-step enhancement process:

- **Compatibility Assessment:** Conducted a comprehensive assessment of Webflow's features and compatibility with the existing website structure.

- **Customization:** Customized Webflow elements to align with InnerCord's branding and design requirements.

- **User Experience Optimization:** Ensured a seamless transition between the original website and the Webflow-enhanced features to maintain a cohesive user experience.

9.2.4. Collaboration and Team Dynamics

Addressing collaboration challenges within the team required a multifaceted approach:

- **Communication Channels:** Established clear communication channels using tools such as Slack and Trello to facilitate real-time collaboration and information sharing.

- **Agile Methodologies:** Implemented agile methodologies, including Scrum and Kanban, to streamline project workflows, enhance adaptability, and ensure efficient progress.

- **Regular Team Meetings:** Scheduled regular team meetings to discuss progress, address challenges, and foster a collaborative environment.

Facilities Required for Proposed Work

For the successful execution of the proposed internship projects, several key facilities are indispensable. Firstly, on the hardware front, providing standard laptops or desktops for team members is crucial. Additionally, having a range of testing devices, including smartphones and tablets, is essential to conduct thorough cross-compatibility testing.

In terms of software resources, ensuring access to widely used Integrated Development Environments (IDEs) such as Visual Studio Code is imperative. A robust version control system, preferably Git, should be in place for efficient code management. Web development tools, including various web browsers, debugging tools, and relevant extensions, are essential for a seamless development process.

Specific to projects involving Streamlit, a Python environment equipped with Streamlit and other necessary libraries is a prerequisite.

Collaboration and communication tools play a pivotal role. Employing project management tools like Trello or Jira for task tracking enhances organization. Utilizing communication platforms such as Slack or Microsoft Teams fosters efficient team interaction.

Lastly, a conducive physical workspace is fundamental. Dedicated workstations with ergonomic setups contribute to a comfortable and productive work environment. Equipped meeting rooms facilitate effective discussions and presentations.

Ensuring the availability of these facilities will undoubtedly contribute to the efficiency and success of the internship projects at InnerCord.

Real-world Application

The internship at InnerCord offered practical insights into the application of various technologies:

11.1. MEAN Stack Web Development:

Utilizing MongoDB, Express, Angular, and Node.js in the InnerCord web application showcased their real-world effectiveness. MongoDB served as a reliable database, while Express and Node.js ensured robust API functionality. Angular facilitated dynamic interfaces, and deploying on Heroku demonstrated the scalability of MEAN stack applications.

11.2. Streamlit Data Analysis:

The Streamlit error analyzer project applied data analysis to provide actionable insights into error patterns and system performance. This real-world application enhanced decision-making within InnerCord, showcasing the significance of dynamic data visualization.

11.3. Webflow Integration for Design Enhancement:

Integrating Webflow into InnerCord's website demonstrated the practical use of design tools in a professional setting. The real-time impact on user engagement highlighted the significance of such integrations in the competitive online landscape.

In conclusion, the real-world application section emphasizes the tangible impact of technologies and methodologies in addressing business challenges and fostering innovation within InnerCord.

Evaluation

Internship Assessment (KCS-752) Manual (CS, VII SEM)