



KADI SARVA VISHWAVIDYALAYA

**LDRP Institute of Technology and Research,
Gandhinagar**



DEPARTMENT OF COMPUTER ENGINEERING

An Internship Report

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Period of Internship: Jan 2024 to June 2024

Company Name: TatvaSoft

Company Email: info@tatvasoft.com

Company Supervisor (Project Manager) Name: Ms. Sweety Patel

Submitted on: 22-03-2024

ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to TatvaSoft for giving me the opportunity to complete my internship with them. This experience has been invaluable in my personal and professional growth, and I cannot thank the company enough for the knowledge, support, and guidance that they have provided me with during this time.

During my internship, I had the opportunity to work alongside some of the best professionals in the industry. Their expertise and experience have helped me gain a deeper understanding of software development and project management. I am grateful for the chance to learn from them and for their willingness to share their knowledge with me. The supportive and collaborative environment at TatvaSoft has allowed me to expand my skillset and learn new techniques and technologies that will undoubtedly be beneficial to my future career.

Furthermore, I would like to express my gratitude to my mentors at TatvaSoft who have been instrumental in shaping my internship experience. They have been patient, approachable, and provided me with valuable feedback and guidance throughout the duration of my internship. Their support and encouragement have been essential in helping me develop my skills and confidence, and I will always be grateful for their time and effort. Overall, my internship at TatvaSoft has been an incredible experience, and I am grateful for the opportunity to have been a part of such an amazing team.

With regards,

THAKRAR KRISHN BHARATBHAI

SUMMARY

During my internship at the TatvaSoft, I had the opportunity to immerse myself in the intricacies of web development, utilizing .NET for the backend, PostgreSQL for database management, and HTML & CSS for designing user interfaces. My role allowed me to contribute significantly to the development and maintenance of a healthcare platform aimed at streamlining the connection between patients and doctors. From the outset, I was involved in various aspects of the development process, including coding new features, optimizing the application for performance and scalability, and ensuring a seamless user experience. I learned to write robust .NET code, manage complex database systems, and create responsive and intuitive web pages. This hands-on experience was invaluable, teaching me to tackle real-world challenges in software development and make a meaningful impact on healthcare accessibility.

Acquiring a diverse set of skills was a key takeaway from my internship. I gained technical proficiency in specific tools such as .NET, PostgreSQL, HTML, and CSS, which solidified my foundation in web application development. Beyond the technical realm, I honed my problem-solving skills, learning to navigate the unique challenges presented by a healthcare platform. Collaboration and teamwork became second nature, as I worked alongside a multidisciplinary team, embracing agile development methodologies and contributing to a dynamic, fast-paced environment. This internship not only expanded my technical knowledge but also prepared me for a successful career in the tech industry, particularly in areas where technology intersects with healthcare solutions. It was an enriching experience that shaped my approach to software development and my understanding of its potential to drive positive change in the world.

Date: 1st Mar 2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Krishn Bharatbhai Thakrar is selected from LDRP college for internship in accordance with the college's policy.

Details of the project is as under

Project technology: .NET

Project Title : Hallodoc

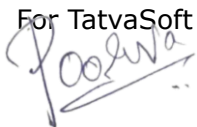
Start Date: Jan 2024

Project Mentor: Ms.Sweety Patel. Learning and development Executive

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For TatvaSoft



Authorized Signatory

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1. Introduction:

- **Background of the internship:**

Building HalloDoc Portal, a project aimed at enhancing healthcare accessibility through technology, was a transformative experience. As part of a tech firm's initiative, I contributed to developing a platform that streamlined patient-doctor interactions using .NET, PostgreSQL, HTML, and CSS.

This role allowed me to apply my computer science background and passion for healthcare innovation in a practical setting. Working closely with experienced professionals, I improved my technical skills and gained insights into designing empathetic, user-centric healthcare solutions. Witnessing the project's impact on improving healthcare delivery inspired me to pursue a career where technology serves as a catalyst for positive change in society.

- **Objectives and goals of the internship:**

In my internship at the TatvaSoft, I aimed to bridge the gap between theoretical knowledge and practical application in software development, specifically focusing on .NET, PostgreSQL, HTML, and CSS. The goal was to deepen my technical expertise, ensuring a comprehensive understanding of how to develop scalable, user-friendly applications. The healthcare context of the portal provided a unique perspective on the transformative power of technology in improving patient care and accessibility.

Moreover, the internship was a valuable opportunity to enhance my problem-solving skills and critical thinking, as I navigated the challenges of a real-world project. It fostered a deep understanding of the healthcare technology sector, guiding my career aspirations towards creating digital solutions with a meaningful impact on society.

- **Brief company overview:**

TatvaSoft is a leading software development company that provides customized software solutions to businesses of all sizes across various industries. With over 19 years of experience, the company has established itself as a reliable and trusted technology partner for its clients. Their team of highly skilled developers and designers have expertise in developing cutting-edge software applications, mobile apps, and web solutions that cater to the specific needs of each client. TatvaSoft's commitment to delivering high-quality solutions has earned them a reputation for excellence, and their long-standing relationships with clients are a testament to their dedication and professionalism. With offices in the USA, UK, Canada, Australia, and India, TatvaSoft is well-positioned to serve clients globally and help them achieve their business goals through technology.

2. Company Profile:

TatvaSoft, headquartered in Ahmedabad, Gujarat, India, stands as a beacon of technological innovation and bespoke software development solutions, serving a diverse international clientele. Since its inception in the early 2000s, TatvaSoft has dedicated itself to providing custom-tailored IT services and solutions, navigating the complexities of software development with unparalleled expertise and a commitment to excellence. The company's service portfolio spans a broad spectrum, encompassing custom software development, mobile and web application development, enterprise solutions, e-commerce platforms, and more, tailored to the nuanced needs of industries ranging from finance and healthcare to education and retail.

Harnessing a blend of advanced technologies and methodologies, including .NET, Java, PHP, AngularJS, and more, TatvaSoft crafts scalable, secure, and innovative solutions that propel businesses forward. The cornerstone of TatvaSoft's success is its team—comprising highly skilled developers, engineers, designers, and project managers—who bring a wealth of expertise and a collaborative spirit to every project. This skilled workforce is committed to a customer-centric approach, ensuring bespoke solutions that align with clients' specific objectives, driving value and fostering long-term partnerships.

With its roots in Ahmedabad, TatvaSoft's vision and capabilities transcend geographical boundaries, with a robust global presence that includes offices and clients worldwide. This global outreach enables the company to deliver its services on an international scale, embracing technological and cultural diversities to meet and exceed global market demands. As part of its growth trajectory, TatvaSoft continuously invests in emerging technologies and research, positioning itself at the forefront of digital innovation and transformation.

Looking ahead, TatvaSoft is poised for further expansion, driven by a mission to harness technology in solving complex business challenges and enabling digital transformation across industries. The company remains steadfast in its commitment to quality, transparency, and agility, principles that have underpinned its journey from a burgeoning startup to a distinguished name in the software development industry. Through its enduring dedication to technological excellence and client satisfaction, TatvaSoft aspires to continue shaping the digital landscape, making significant contributions to the tech community and businesses around the globe.

3. Internship Position:

- **Job title and description:**

As a Trainee Software Engineer specializing in .NET technology at TatvaSoft, based in Ahmedabad, Gujarat, I am on an exciting journey to kickstart my career in the vibrant field of software development. With a focus on .NET technologies, my role involves diving deep into the world of web and desktop application development, under the guidance and mentorship of seasoned professionals. My academic background in computer science or a related field has laid the foundation, and now, immersed in real projects, I'm expanding my skill set and understanding of how to bring innovative solutions to life.

- **Roles and responsibilities:**

As a Trainee Software Engineer specializing in .NET technology at TatvaSoft, my role is multifaceted and designed to be both challenging and enriching. From the onset, I am immersed in a culture of learning and innovation, working alongside seasoned professionals who guide me through the complexities of software development. My responsibilities span several key areas, each contributing to my growth and the success of our projects.

Development and Collaboration: I actively participate in the development of web and desktop applications using .NET Framework and .NET Core technologies. This involves coding, testing, and debugging applications under the supervision of experienced engineers. Collaborating closely with my team, I contribute to brainstorming sessions and problem-solving discussions, learning to view challenges from multiple perspectives and discovering efficient solutions.

Learning and Application: A significant part of my role is dedicated to learning. I engage in rigorous training sessions to enhance my understanding of .NET development, software design patterns, and the best practices in software engineering. This learning is not just theoretical; I apply these new skills directly to my work, refining my approach to development with each project.

Analysing Client Requirements: I assist in analysing and documenting client requirements, gaining insight into the practical aspects of software development. This involves understanding the client's vision, the specific functionalities they need, and how these can be efficiently implemented within the software solution we are developing.

Maintenance and Support: Supporting the maintenance of existing software applications is another key responsibility. This includes troubleshooting issues, implementing bug fixes, and ensuring the software continues to meet the client's needs effectively. Through this process, I learn the importance of reliability and user satisfaction in the development lifecycle.

Staying Updated: The tech industry is constantly evolving, and part of my responsibility is to stay abreast of the latest advancements in .NET technology and software development methodologies. This continuous learning ensures that our team remains innovative and competitive in delivering cutting-edge solutions.

In my role as a Trainee Software Engineer at TatvaSoft, I am not just a participant but an active contributor to the creation of software that makes a difference. Every day presents a new opportunity to learn, grow, and move closer to becoming a skilled software engineer, capable of tackling the dynamic challenges of the tech industry.

4. Project(s) Overview:

HalloDoc is a cutting-edge digital portal meticulously designed to transform the traditional dynamics of doctor-patient interaction. Leveraging the robust capabilities of .NET, PostgreSQL, HTML, and CSS, HalloDoc offers a comprehensive solution aimed at enhancing the accessibility, efficiency, and quality of healthcare services. This platform is a beacon of innovation in the healthcare industry, embodying the integration of technology and healthcare to meet the evolving needs of modern patients and healthcare providers.

At the heart of HalloDoc's architecture is the .NET framework, chosen for its reliability, scalability, and security features. This powerful framework underpins the platform's backend, enabling seamless integration with healthcare APIs, management of complex business logic, and facilitation of real-time data processing. Such technical robustness ensures that HalloDoc can handle high volumes of user interactions while maintaining fast response times and operational integrity.

The database system is powered by PostgreSQL, a choice reflecting the platform's need for secure, efficient, and reliable data storage and retrieval mechanisms. With its advanced features and robust performance, PostgreSQL manages the vast amounts of sensitive patient and healthcare provider data, ensuring data privacy and integrity are upheld to the highest standards. This setup allows for the quick and secure access of medical records, appointment schedules, and consultation histories, making the management of healthcare information a seamless process.

On the frontend, HalloDoc utilizes HTML and CSS to craft a user interface that is not only aesthetically pleasing but also highly functional and intuitive. The design prioritizes ease of navigation, ensuring that users of all technological proficiencies can efficiently find the information and services they need. Whether accessing the portal from a desktop or a mobile device, users are presented with a responsive and accessible design, emphasizing readability, ease of use, and overall user satisfaction.

HalloDoc's feature set is comprehensive, including appointment scheduling, virtual consultations, secure messaging, and access to electronic health records. By facilitating direct and efficient communication between patients and healthcare providers, the portal eliminates traditional barriers such as geographical distance and long wait times. For healthcare professionals, HalloDoc streamlines administrative tasks, from managing appointment calendars to documenting patient interactions, thereby enhancing the focus on patient care.

The development of HalloDoc was driven by a deep understanding of the challenges faced by both patients and healthcare providers in the traditional healthcare model. By offering a centralized, digital platform for healthcare interactions, HalloDoc not only makes healthcare more accessible but also opens new avenues for patient engagement and empowerment. This project is a testament

to the potential of digital solutions in transforming healthcare delivery, making it more patient-centred, efficient, and accessible to everyone, regardless of their location or circumstances.

5. Technical Skills Acquired:

List of Technical Skills Developed During the Internship:

1. **.NET Framework and .NET Core Development:** Gained proficiency in using Microsoft's .NET framework for backend development, learning to create scalable, secure web applications and services.
2. **PostgreSQL Database Management:** Developed skills in database design, query optimization, and management using PostgreSQL, focusing on efficient data storage and retrieval.
3. **HTML and CSS for Frontend Design:** Enhanced abilities in using HTML and CSS to design responsive and intuitive user interfaces, emphasizing usability and visual appeal.
4. **Software Version Control with Git:** Learned to use Git for version control, facilitating team collaboration, code management, and tracking changes across the project's lifecycle.
5. **RESTful API Integration:** Gained experience in integrating and consuming RESTful APIs, allowing for the seamless exchange of data between different software systems.

Explanation of How Each Skill Was Applied:

1. **.NET Framework and .NET Core Development:** Utilized in building the backend logic of the HalloDoc portal, handling data processing, and server-side functionalities critical for the application's performance.
2. **PostgreSQL Database Management:** Applied in designing the database schema for HalloDoc, optimizing queries for faster data access, and managing patient and doctor records securely.
3. **HTML and CSS for Frontend Design:** Employed in crafting the user interface of HalloDoc, focusing on creating a seamless and engaging user experience across various devices.
4. **Software Version Control with Git:** Used to manage the project's source code, allowing the team to work collaboratively without overwriting each other's contributions and to revert to previous versions when necessary.
5. **RESTful API Integration:** Integral in connecting HalloDoc with external healthcare systems and services, enabling features like appointment scheduling and access to electronic health records.

6. Conclusion:

Concluding about my internship at TatvaSoft, where I had the opportunity to contribute to the HalloDoc project, has been a pivotal moment in my budding career in software development. This experience was not merely about applying what I had learned academically; it was a comprehensive journey that challenged and expanded my technical skills, understanding of project development, and insight into the healthcare technology sector. Working on HalloDoc, a portal designed to enhance doctor-patient connections using .NET, PostgreSQL, HTML, and CSS, allowed me to see firsthand the impact of integrating technology with healthcare.

Throughout this internship, I developed a strong foundation in several key technologies, each contributing significantly to the success of the HalloDoc project. From mastering backend development with .NET, managing complex databases with PostgreSQL, to designing intuitive user interfaces with HTML and CSS, the skills I acquired are invaluable. Moreover, learning to navigate through the development process using Agile methodologies, understanding the importance of security in healthcare applications, and collaborating effectively within a team are experiences that have prepared me for a future in software development.

The project's success was a testament to the collaborative effort of the entire team and the robust technologies we employed. Seeing HalloDoc come to life, knowing it has the potential to streamline healthcare access and improve patient outcomes, has been incredibly rewarding. This internship has not only bolstered my technical expertise but has also instilled a deeper appreciation for the role of technology in solving real-world problems. As I move forward in my career, the skills, experiences, and insights gained during this internship will undoubtedly serve as a solid foundation, inspiring me to continue developing solutions that leverage technology for the greater good.