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| **Candidate Name** | **Vivek Patil** |
| **Total Years of Experience** | **2 Years 1 Month** |
| **Notice Period** | **Official 3 Months ( Negotiable to 30-45 Days)** |
| **Location** | **India** |
| **Pre-Screening Q&A** | |

**Experience and Background:**

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| **Question’s** | **Answer’s** |
| • Do you have at least 2 years of experience in software development or a relevant degree? If yes, elaborate | Yes, I have over 2 years of experience in software development and currently work as a Solution Developer at Tata Technologies and where Tata Motors is my onsite client. My work involves creating and implementing solutions for strategic business planning, digital product development, and connected vehicle platforms.  One of my key projects has been the Engineering Service Design and Outsourcing flow, where I utilized technologies like Javascript, React, Node.js, PostgreSQL, and CI/CD pipelines to streamline operations and enhance efficiency. Additionally, I’ve contributed to the Connected Vehicle Platform project, where I worked on integrating advanced features to enable real-time data processing and communication between vehicles and cloud systems, improving user experience and safety features.  Additionally, I hold a strong foundation in software development principles, backed by my participation in multiple hackathons such as CODE BREAK 3.0 and NSBEHacks, where I have won awards for my innovative solutions. My professional experience and active involvement in real-world projects have equipped me with practical skills and the ability to deliver high-quality software solutions. |
| • What is your background in Software Development? If yes, elaborate. | I have a strong foundation in software development, backed by a 4-year degree in Computer Engineering. During my academic journey, I actively participated in multiple hackathons, such as CODE BREAK 3.0, KPIT NOVA Hiring Hackathon, NSBEHacks, RU Hacks, and more, where I won awards in various categories. These hackathons helped me sharpen my problem-solving skills, learn new technologies, and collaborate effectively in competitive and fast-paced environments.  Professionally, I have over 2 years of experience as a Solution Developer at Tata Technologies and Tata Motors. In my role, I work on enterprise-grade solutions like the **Engineering Service Design and Outsourcing** project, utilizing technologies such as React, Javascript, Node.js, PostgreSQL, and CI/CD. My work involves creating scalable software for business-critical processes, such as IPA, synopsis creation, milestone tracking, and purchase order management.  This blend of academic achievements, hackathon experiences, and professional expertise has provided me with a strong technical and practical background in software development, enabling me to excel in building innovative and efficient solutions. |
| • Can you list the programming languages you have experience with from the following: Java, VB .NET, C#, SQL/PL-SQL. If yes, elaborate. | I have hands-on experience with **SQL**, where I have worked extensively on writing and manipulating SQL queries. In my current role as a Solution Developer at Tata Technologies and Tata Motors, I have handled large datasets, optimized queries, and integrated them with various back-end systems. While I have not specifically worked with **PL-SQL** or written stored procedures, I have a deep understanding of SQL and its application in real-world projects, particularly in databases like **MySQL**.  While I do not have professional experience with **Java**, **VB .NET**, or **C#**, I am a quick learner and confident in my ability to adapt to new programming languages as required. My strong foundation in software development principles and my active involvement in solving real-world problems equip me with the versatility to excel in learning and applying these languages effectively. |

**Skills and Knowledge:**

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| **Question’s** | **Answer’s** |
| **•** Have you worked with Linux/Unix commands or file management? Can you describe a recent project where you applied these skills? | I am aware of working within a **Linux/Unix** environment and have a basic understanding of Linux commands. While I am not a regular user of complex commands, I am comfortable with basic tasks such as navigating the file system, managing files and directories, and executing simple scripts.  In my role at **Tata Technologies and Tata Motors**, I have used Linux commands for tasks like file manipulation, version control, and monitoring logs. For example, I have used commands like cd, ls, cp, and mv for file management, as well as grep to search logs and find specific entries.  Although I don’t use complex Linux commands regularly, I am confident in my ability to apply these basic skills effectively and am open to expanding my knowledge of more advanced commands as needed. |
| **•** Do you have experience developing or testing application code? Can you provide a brief example? | Yes, I have experience both developing and testing application code, particularly in the context of web development. In my current role at **Tata Technologies and Tata Motors**, I have developed full-stack applications using technologies like **React**, **Node.js**, and **PostgreSQL**.  For instance, I developed a key feature for the **Engineering Service Design and Outsourcing** project, where I worked on creating scalable APIs to manage purchase orders, milestones, and tracking. I used **Node.js** for backend development and **React** for the front-end, ensuring smooth communication between the server and the client.  Regarding testing, I regularly write **unit tests** for my JavaScript code using frameworks like **Jest** and **Mocha**. One example is when I tested an API endpoint to ensure that it correctly handled different HTTP requests (GET, POST, PUT, DELETE) and validated inputs effectively using Postman. This helped identify bugs early in the development process, ensuring that the application was both functional and robust. In addition to that I also prefer Manual Testing before writing any of the Test Cases to check and Validate the Proper Business Logic.  My experience in both developing and testing code has helped me ensure high-quality software that meets both functional and non-functional requirements. |
| • Have you ever configured or tuned software to meet specific business needs? Please provide an example | Yes, I have experience configuring and tuning software to meet specific business needs, particularly in large-scale enterprise systems like the Connected Vehicle Platform. However, for existing software, I have not specifically tuned or configured any third-party solutions, but I have worked extensively on tuning and configuring custom-built solutions within the organization, leveraging technologies we developed in-house. These solutions required seamless integration of multiple systems to manage vehicle data, user interactions, telematics, and analytics in real-time.  For example, I contributed to optimizing PostgreSQL and NoSQL databases to efficiently manage both structured (vehicle parameters) and unstructured data (sensor logs, GPS data). I applied data partitioning strategies to handle large tables storing vehicle information efficiently. In addition, I was responsible for configuring Node.js APIs to manage vehicle data and interact with various sensors in real time. The key challenge was ensuring that high-frequency incoming data streams from multiple vehicles were processed, stored, and analyzed without causing performance issues. |
| • Have you used tools like DataStage, Perl, or Shell Scripting in your projects? | Yes, I have worked with **Perl** in my previous projects. Specifically, I worked on a **legacy Perl-based system** that was part of the backend for a large-scale application. The goal was to eventually migrate this legacy code to a more modern **Node.js** architecture.  In this project, I was responsible for thoroughly understanding the existing **Perl code** and analyzing its structure and logic. This was necessary to ensure that the functionality could be accurately replicated in **Node.js**. I also worked on identifying and fixing any existing bugs in the Perl code while documenting the functionality to facilitate a smooth transition to Node.js.  The process involved the following:   * **Bug Fixing**: I had to regularly debug the Perl code to fix any issues, ensuring that the legacy system continued functioning properly until the migration was complete. * **Understanding Legacy Code**: Since the system was built using Perl and had been running for years, I invested significant time in comprehending the entire Perl codebase. This included understanding how data was being processed, the interactions with the database, and any APIs or external systems the Perl code was integrated with. * **Migration to Node.js**: After understanding the Perl code, I worked closely with the team to refactor the code into **Node.js**, ensuring that it was optimized for modern use while maintaining the core functionality. * **Testing**: As we migrated from Perl to Node.js, I also helped in writing tests to ensure the new Node.js implementation worked as expected, while cross-referencing the old Perl code to make sure no functionality was lost during the migration.   In summary, my experience with **Perl** was primarily focused on maintaining and refactoring legacy systems, bug fixing, and ensuring a smooth transition to more modern technologies like **Node.js**. This required me to have a strong understanding of Perl's behaviour and functionality, which played a key role in ensuring the project’s success |
| **•** Are you familiar with relational database principles, such as Oracle or other DBMS? Can you describe a recent project where you applied these principles? | - In the **ESDO project**, I worked with **PostgreSQL** and **MySQL** to optimize complex SQL queries to improve performance and scalability.  In the **Connected Vehicle Platform (CVP)** project, I used **Cassandra** to handle large volumes of real-time vehicle data, focusing on partitioning and replication strategies for efficient data retrieval.  Additionally, I have worked on a **POC (Proof of Concept)** for a **web development project**, where I integrated **MongoDB** to manage product data and user profiles. This allowed me to showcase how to handle dynamic content and user interactions in a scalable manner using **MongoDB**'s flexible document structure. While I haven’t worked at an advanced architectural level, I have hands-on experience with schema design, query optimization, data migration, and ensuring data integrity. |

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| **Candidate Summary** | I am a software developer with over 2 years of experience and a **4-year Computer Engineering degree**. I have actively participated in multiple hackathons and have won awards, further developing my problem-solving and coding skills. My expertise includes **full-stack development** with technologies such as **React**, **Node.js**, **MySQL**, and **other relevant Technologies**.  In my previous roles, I have contributed to projects like the **Connected Vehicle Platform**, **Engineering Service Design and Outsourcing**, and **Purchase Order systems**, focusing on **Full Stack Web Development.** I have also developed **POCs** to demonstrate scalable solutions.  I am experienced in transitioning legacy systems to modern architectures, such as migrating **legacy code to latest code**, ensuring code stability, and optimizing performance. I am committed to applying efficient, scalable solutions to meet both technical and business requirements. |