

VIT/INFT/LOR/2024/728

### LETTER OF RECOMMENDATION

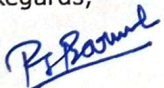
I am delighted to offer my strong recommendation for Paresh Devlekar as he seeks admission to a graduate program at your renowned university. As an assistant professor in the Department of Information Technology at VIT, I have taught Paresh in multiple courses over the course of three semesters, including Database Management System, Automata Theory, Advanced Data Management Technology, SQL Lab, and DevOps Lab. Through our extensive interactions, I have observed his proficiency in mastering complex subjects, consistently submitting assignments on time, actively engaging in classroom discussions, and, more importantly, not having missed a lecture or practical session, all of which show his genuine sincerity to his studies. He is a motivated and academically driven student, always eager to deepen his understanding and expand his knowledge.

Under my guidance, Paresh worked on challenging projects that showcased his technical expertise in relational database design and DevOps. In his third semester, he developed a web application, Book-Vault, in which he designed a normalized schema to minimize data duplication and ensure optimal relationships between the user, inventory, and transaction tables. He implemented advanced SQL techniques, such as triggers and foreign key relationships, to maintain consistency and referential integrity. He applied indexing strategies on frequently searched fields like book titles and user IDs, which significantly sped up data retrieval. He implemented ACID-compliant transactions to ensure data integrity during critical operations like item checkouts and returns, making sure updates to user records and inventory were consistent. Additionally, he automated routine processes, such as sending reminder notifications for overdue items, by creating stored procedures. In his seventh semester, he took the lead in developing a scalable deployment pipeline for the same web application. He containerized the application with Docker by creating a Dockerfile to define its dependencies, building images, testing them locally, and then pushing them to a container registry. Next, he set up a Kubernetes cluster, where he created deployment and service manifests for application scaling, orchestration, and exposure while also implementing a horizontal pod autoscaler for scalability. To streamline the process, he built a CI/CD pipeline with Jenkins, writing a Jenkinsfile to automate the testing, image creation, and deployment of the application. His work demonstrated a strong command of core database concepts as well as modern DevOps practices.

As his mentor, I had the pleasure of seeing him embrace learning with genuine interest, always going above and beyond what was required in the classroom. What truly makes him stand out is his ability to thrive not only in his studies but also in extracurricular activities. He was actively involved in committees like the Information Technology Students Association, where his organizational abilities and teamwork skills really stood out. His knack for managing an intense academic load alongside valuable extracurricular involvement shows his dedication, well-roundedness, and commitment to improving himself both personally and professionally.

We are proud of his decision to pursue graduate studies abroad, showcasing his drive to explore new academic horizons and achieve greater excellence in his field. With his exceptional interpersonal skills, academic excellence, and unwavering dedication, I am sure he will make a significant impact at your institution. I have no doubt that he has a promising and successful career ahead of him. It is with great enthusiasm that I recommend him for admission to the Master in Computer Science program at your university. I wish him the very best in all his future endeavors.

Regards,



Prof. Rohit Barve  
Assistant Professor  
Department of Information Technology, VIT  
Email: rohit.barve@vit.edu.in  
Contact: +91-8898138232