Ritvik Babre

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MTech
Software Engineering
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Education

•Veermata Jijabai Technological Institute (VJTI) *2024-2026*
MTech Software Engineering CGPA/Percentage: 8.25

•KC College of Engineering and Management Studies and Research *2020-2024*
B.E. IT CGPA/Percentage: 7.70

Experience

•Vivekanand Institute of Technology *12/08/2025 – 11/08/2026*
Junior Research Fellow Chembur, Mumbai
- Functioned in an assistant professor capacity while formally engaged as a Junior Research Fellow, independently teaching subjects and conducting lectures and laboratory sessions for undergraduate students, including Data Structures & Algorithms (DSA), Advanced Database Management Technologies (ADMT), Cloud Computing, IT Software Management, DevOps, E-Commerce & E-Business, and Agile Software Development.
- Managed end-to-end lab conduction and student evaluation alongside research fellowship responsibilities.

•Amazon Web Services *28/11/2021*
Cloud Foundations Internship – Eduskills (20-hour Online Internship) Online
- Gained hands-on experience in AWS services, cloud computing fundamentals and deployment strategies.
- Learned to create S3 buckets and manage instances

•Palo Alto Networks *July-September 2022*
Networks Cybersecurity Internship – Eduskills (10-week Online Internship) Online
- Developed a foundational understanding of network security, firewalls, and threat detection techniques.

Personal Projects

•DriveXR (MTech Thesis Project)
A Meta Quest Link-Based Extended Reality Architecture for Physical Wheel Integration and Hand-Tracked Interaction in Driver Training
- Tools & technologies used: Unity 6, C#, Meta Quest Link, OpenXR, Logitech G29 (Wheel, Pedals, Shifter)
- Designed and built a VR driving simulator streaming a PC-hosted Unity application to a Meta Quest 3 headset via Meta Quest Link, integrating a Logitech G29 wheel, pedal set, and shifter for physical driving input.
- Implemented hand-tracked VR interactions (steering wheel grab, horn) via custom physics-trigger scripts, a render-texture-based mirror camera system, and a finite-state-machine-driven NPC traffic AI.

•Deadend Sunrise (VR Horror Game)
Immersive VR experience integrating realistic environment interactions using Google Cardboard
- Tools & technologies used: Unity, GitHub, C#, Mixamo, OpenXR
- A Horror Game made in Unity using assets from Unity Asset Store, Mixamo and Turbo Squid. Made for Android with Google Cardboard and for PC with no VR

•Personal Portfolio Website
Portfolio website showcasing projects and achievements.
- Tools & technologies used: Next.js, Vercel, Tailwind CSS, Cloudflare
- www.ritvikbabre.com/

•Vehicle Number Plate Detection System
Automated number plate recognition using OpenCV.
- Tools & technologies used: Python, Machine Learning
- An automatic number plate recognition app made using python that scans numberplates and converts the number into a machine readable format.

Achievements

•Achievement Second Place in Projectathon 2.0 Held at Atharva College of Engineering *19/04/24*

•Achievement Research Paper published in STM Journals' Journal of Multimedia Technology and Recent Advancements *November 2024*

Certifications

•**IBM**: AI, Cloud, Cybersecurity, Python

•**AWS**: Cloud Foundations

•**Great Learning**: MongoDB, Cybersecurity, DevOps

•**Linux Foundation**: DevOps, Kubernetes, Linux

•**Alteryx**: Data Analytics

•**Cisco**: IoT