

VINAYAK KUMAR SINGH

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Summary

Motivated Software Engineer with foundational experience in web development, machine learning, and scalable software solutions. Proficient in building responsive web applications, fine-tuning ML models, and collaborating in team environments. Passionate about developing user-centric applications and solving complex technical challenges.

Education

Vellore Institute of Technology <i>Master of Computer Applications</i>	2023 - 2025 8.26/10 CGPA
Atal Bihari Vajpayee Vishwavidyalaya <i>Bachelor of Computer Applications</i>	2020 - 2023 7.95/10 CGPA

Experience

KIWIS & BROWNIES <i>Software Developer</i>	Oct 2024 - Apr 2025 Bangalore, Karnataka
<ul style="list-style-type: none">Developed Vue.js components, leveraging lazy loading to reduce load times by 25% and enhance responsiveness.Optimized large dataset performance with virtual scrolling and shallowRef, reducing DOM load.Refactored legacy code to reduce technical debt by 30%, boosting maintainability and ensuring seamless user experience.	

Projects

Multilingual VQA Vision-Language Model — <i>Qwen2.5-VL, Unsloth, Finetuning</i> Link	March 2025
<ul style="list-style-type: none">Fine-tuned Qwen2.5-VL for multilingual VQA across 14 languages using EXAMS-V dataset.Preprocessed datasets to optimize model training and ensure multilingual compatibility.Enhanced reasoning capabilities through additional training objectives for complex dependencies.	
Serverless Voting Application — <i>AWS Lambda, API Gateway, DynamoDB</i> Link	May 2024
<ul style="list-style-type: none">Built a cloud-native, serverless voting application with 5,000+ daily votes and 99.8% uptime.Developed a React-based interactive UI for programming languages and detailsCrafted modular components that boosted scalability and reduced new feature development time by 20%	
Real-Time 3D Object Manipulation — <i>ML, Computer Vision, Gesture Recognition</i> Link	April 2024
<ul style="list-style-type: none">Built a real-time hand gesture recognition system with 95.2% accuracy using computer vision and ML.Developed hand landmark detection with MediaPipe and scikit-learn, boosting engagement by 40%.Translated hand gestures into 3D object rotations and zooms using Windows 3D Viewer.	
MediBook: Medical Appointment Scheduler with Health History — <i>CRUD, MySQL</i> Link	March 2024
<ul style="list-style-type: none">Developed a CRUD-based appointment platform that cut booking errors by 20%.Implemented secure, role-based doctor-patient consultations, reducing unauthorized access by 50%.Optimized MySQL with normalization and stored procedures to reliably retrieve 10,000+ records at 99.9% uptime.	

Technical Skills

Languages: Python, Java, JavaScript

Frameworks & Libraries: HTML5, CSS3, Vue.js, React, Bootstrap, jQuery, PHP

Developer Tools: GitHub, AWS, Cursor, Postman, CI/CD, Docker

Soft Skills: Problem Solving, Technical Communication, Analytical Thinking

Achievements

- Published research paper on **Advancing Virtual Reality Interaction through Real-Time Hand Gesture Recognition for Immersive Experiences** in IEEE.
- Successfully Built multiple client Website as a **freelance developer** with 20,000+ active Users.
- Led the Technical Team at **Club**, enhancing website usability and engagement while fostering leadership and teamwork.