

RACHIT SINGH

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OBJECTIVE

Computer Science graduate from MIET Meerut with hands-on experience in full-stack development, machine learning, and deep learning for computer vision. Seeking a software engineering or AI/ML role where I can contribute to building scalable, intelligent systems that deliver real-world impact.

EDUCATION

Meerut Institute of Engineering and Technology (MIET)

B.Tech, Computer Science Engineering

- Relevant Coursework: Data Structures & Algorithms, Machine Learning, Database Management Systems, Computer Networks

2022 – 2026

Meerut, India

All Saints School

Intermediate (CBSE – PCM)

2020 – 2022

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, SQL

Frameworks & Libraries: React.js, Next.js, Node.js, FastAPI, TensorFlow, Keras, OpenCV

Deep Learning & CV: CNN, U-Net, Transformer Architectures, Transfer Learning

Data Science: Pandas, NumPy, Scikit-Learn, Matplotlib, Tableau

Databases & APIs: MySQL, MongoDB, Google Analytics API, Facebook Ads API

Tools & DevOps: Git, Docker, Redis, Celery, VS Code, Google Colab, Arduino IDE

EXPERIENCE

Software Developer

Nov 2025 – Present

Novoguard LLC (Verified Care)

Remote — Sheridan, WY, USA

- Designed and implemented responsive web components and UI features to streamline clinic discovery and appointment booking workflows, improving end-user experience across the platform.
- Built and optimized RESTful APIs for clinic data management, search functionality, and user authentication, reducing API response latency through efficient query design.
- Collaborated with cross-functional teams to integrate third-party mapping and geolocation services, enabling location-aware search for 500+ listed clinics.

PROJECTS

Satellite Image Segmentation | Python, TensorFlow, Google Colab

[View Project](#)

- Developed a terrain classification system leveraging CNN and U-Net deep learning architectures for satellite imagery analysis, achieving 92% accuracy across diverse geographical regions.
- Built an automated preprocessing and inference pipeline incorporating data augmentation and transfer learning for robust and generalizable model performance.

InterviewForge — AI Avatar Interview Platform | Next.js, TypeScript, FastAPI, PostgreSQL, Docker

[View Project](#)

- Built a real-time AI mock interview platform for software engineers featuring an animated AI avatar interviewer with voice interaction, powered by Whisper speech-to-text and ElevenLabs text-to-speech.
- Engineered an adaptive LLM-driven question engine covering DSA, system design, and behavioral rounds, with a WebSocket-based session layer and Celery + Redis workers for non-blocking audio processing.
- Implemented an in-browser Monaco code editor backed by a secure Docker sandbox (isolated containers with CPU, memory, and network restrictions) and LLM-based rubric scoring with post-session analytics and replay.

Prospera AI | Next.js, Gemini API, Tailwind CSS

[View Project](#)

- Built an AI-powered career counseling platform featuring intelligent recommendation algorithms and a personalized chatbot powered by the Gemini API.
- Architected the system for high concurrency, supporting 1,000+ simultaneous users via Next.js server-side rendering, with an intuitive UI optimized for student career exploration.

RESEARCH

Satellite Imagery Environmental Monitoring

Ongoing — MIET Meerut

- Co-authoring a research paper on multi-sensor satellite image analysis using a hybrid CNN-Transformer-LSTM framework for environmental monitoring; responsibilities span model design, preprocessing pipeline development, and IEEE-formatted manuscript preparation.
- Collaborating with peers (Megha Sharma, Abhishek Verma, Rachit Sharma) and faculty supervisor at MIET Meerut.

CERTIFICATIONS

MongoDB University — CRUD Operations & Advanced Schema Design

Coursera (Google) — Tools of the Trade: Linux and SQL