

Nandan Patel

Bachelor of Technology
in Computer Engineering

G H Patel College of Engineering and Technology, Anand

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Ahmedabad, Gujarat, India

[Github](#) | [Website](#)

[linkedin.com/in/patel-nandan/](https://www.linkedin.com/in/patel-nandan/)

Results-driven AI/ML Engineer and final-year Computer Engineering student with hands-on experience in computer vision, generative models, and agentic AI systems. Skilled in model development, deployment, and RAG-based LLM pipelines. Seeking full-time AI/ML Engineer roles to build intelligent, production-grade systems.

EDUCATION

Degree	Institute	CGPA/Percentage	Year
Bachelor of Technology	G H Patel College of Engineering and Technology, Anand	9.57 (till 7th sem)	2022-2026

EXPERIENCE

ISRO Space Applications Centre Jan 2026 - Apr 2026

Machine Learning Intern

Ahmedabad, Gujarat

- Researched synthetic PCB defect image generation using Diffusion Models, cTransGAN, and SAGAN; multi-architecture comparative study for large-scale data augmentation
- Developed PCB Structure Detection system using Segment Anything Model (SAM), Canny edge detection, and skeletonization for precise structural boundary analysis
- Skills: PyTorch, Diffusion Models, cTransGAN, SAGAN, SAM, OpenCV, CUDA, Python

Freelance

Jan 2026 - Present

Full Stack AI Engineer

India

- Built RAG-powered Q&A bot inside Automate Pro for process documentation queries, reducing support dependency
- Integrated Gemini OCR into AP Invoice Bot for intelligent part number extraction and automated document classification
- Delivered end-to-end AI-assisted automation pipelines handling invoice validation, PO matching, and Infor IDM uploads
- Skills: Gemini API, RAG, Node.js, REST APIs, BullMQ, Docker, Azure

EnergInAI

Oct 2025 - Nov 2025

Machine Learning Intern

Bhopal, Madhya Pradesh

- Engineered a Dual-Subnetwork NILM architecture with Self-Attention and Dilated Convolutions for appliance-level energy disaggregation
- Packaged Seq2Point model as a production RESTful API mapping aggregate mains power to individual appliance consumption and operational status
- Architecture enables an estimated 15% energy savings for commercial clients through reliable peak demand management
- Skills: PyTorch, Dilated CNNs, Self-Attention, Seq2Point, FastAPI, CUDA, Pandas, scikit-learn

PROJECTS

Skin Cancer Classification

Feb 2025 – Apr 2025

Deep Learning / Edge AI and Published Research

[Github](#)

- Built ResNet50-based deep learning model for multi-class skin lesion classification using transfer learning on dermoscopic images
- Optimized pipeline with image augmentation, early stopping, and systematic hyperparameter tuning for improved generalization
- Results accepted and published in a peer-reviewed journal
- Skills: TensorFlow, Keras, ResNet50, TF Lite, Transfer Learning, OpenCV, Python

Virtual Try-On System

Jan 2025 – Apr 2025

Computer Vision / GAN

[Github](#)

- Built AI-powered virtual clothing try-on system combining MODNet for precise background matting with GAN-based garment warping and deformation
- Integrated MediaPipe for accurate body landmark detection with dual-framework inference pipeline
- Achieved sub-100ms real-time rendering response
- Skills: MODNet, GAN, MediaPipe, OpenCV, PyTorch, TensorFlow, Python

TECHNICAL SKILLS

- **Languages:** Python, C/C++, JavaScript
- **ML / DL:** PyTorch, TensorFlow, Keras, TF Lite, Scikit-learn, CUDA, NumPy, Pandas
- **Generative Models:** Diffusion Models, cTransGAN, SAGAN, GAN, VAE, Stable Diffusion
- **Computer Vision:** OpenCV, MediaPipe, SAM, ResNet50, MODNet, YOLO, BLIP
- **NLP & Agentic AI:** LangChain, RAG, HuggingFace, Llama-3, Gemini API, ChromaDB, Transformers
- **Web & APIs:** FastAPI, Flask, Node.js, REST APIs
- **Embedded & IoT:** Raspberry Pi, ESP32, Arduino, I2C, UART, UDP
- **DevOps:** Docker, Git, GitHub, AWS S3, Vercel

MISCELLANEOUS

- **5G Innovation Hackathon:** National Finalist, 1 Lakh INR grant from Dept. of Telecommunications, Govt. of India (2025)
- **Robofest 4.0:** National Finalist, 2.5 Lakh INR grant from National Robotics Competition (2024)
- **Published Research:** Skin cancer multi-class classification using ResNet50 accepted in peer-reviewed journal (2025)
- **SAP Advanced Certified:** Machine Learning, IoT, Deep Learning, Computer Vision, ABAP from SAP (April 2025)

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Full Stack Engineer and final-year Computer Engineering student with production experience building and shipping enterprise web applications, Android apps, and AI-integrated automation systems. Delivered live client products handling real business workflows including document automation, invoice processing, and e-commerce. Experienced across MERN stack, REST APIs, cloud infrastructure, and system design. Seeking full-time Software Engineer or Full Stack Engineer roles to build scalable, user-facing products.

EDUCATION

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EXPERIENCE

ISRO Space Applications Centre

Jan 2026 - Apr 2026

Machine Learning Intern

Ahmedabad, Gujarat

- Built and improved FM PCB Web Portal using Java Servlet backend with DAO architecture, increasing system speed and responsiveness by 30%.
- Enhanced full workflow from new PCB layout entry to job completion, reducing manual steps and improving UX across the portal
- Skills: Java Servlet, DAO Architecture, JavaScript

Freelance

Jan 2026 - Present

Full Stack AI Engineer

India

- Built Automate Pro, a MERN stack enterprise document automation MVP with two processing bots: AP Invoice Bot (cost-based and order-based) and Item Document Processor reducing manual effort by over 60%
- Designed Part Number Validation & Upload System integrated with Infor IDM via ION API with automated end-to-end validation
- Implemented N-superuser auth system with 2-hour expiring access tokens, Redis-backed job queues via BullMQ, and SFTP/FTP ingestion pipelines
- Delivered production website for Radhe Dental Clinic (Next.js, Tailwind CSS, SEO-optimized), currently live and in active use
- Skills: MongoDB, Express, React, Node.js, Docker, Redis, BullMQ, Next.js, Tailwind CSS, Gemini API, REST APIs, SFTP/FTP

Center of Excellence – Digital Manufacturing

May 2025 – August 2025

AI Intern

Anand, Gujara

- Developed FastAPI backend with full speech recognition and synthesis pipeline for hands-free voice interaction in lab environments
- Integrated ChromaDB vector database and LangChain for context-aware document retrieval with sub-second latency
- Skills: FastAPI, LangChain, ChromaDB, Python, SpeechRecognition, REST APIs

PROJECTS

Radhe Multispeciality Dental Clinic Website

Feb 2026

Frontend Design and Development

radhedental.com

- Designed and delivered a full production website for a multispeciality dental and implant center in Gandhinagar, Gujarat serving 5,000+ patients
- Built multi-page site covering 10+ services (implants, root canal, Invisalign, whitening) with service detail pages, doctor profile, patient testimonials, gallery, and appointment booking integration via KiviHealth
- Stack: Next.js, Tailwind CSS, SEO, Responsive Design

Shreeji Cancer Care Website

April 2026

Frontend Design and Development

shreejicancercare.in

- Built production website for an oncology hospital in Nadiad, Gujarat specializing in chemotherapy, immunotherapy, blood cancer, and pediatric oncology under Dr. Shreyans Patel
- Designed with medical-grade trust signals geo-tagged structured metadata, Open Graph integration, and local SEO optimization for location-based patient discovery
- Stack: React.js, Tailwind CSS, SEO, Structured Metadata, Responsive Design

TECHNICAL SKILLS

- **Core:** Full Stack Development, REST API Design, System Design, Database Design, Software Engineering, Agile Development
- **Languages:** JavaScript, TypeScript, Java, Python, C#, PHP, C/C++
- **Frontend:** React, Next.js, Tailwind CSS, Responsive Design, SEO Optimization
- **Backend:** Node.js, Express, FastAPI, Flask, Java Servlet, REST APIs
- **Databases:** MongoDB, Firebase Firestore, ChromaDB, Redis
- **DevOps & Infra:** Docker, BullMQ, Nginx, Git, GitHub, AWS S3, Vercel, SFTP/FTP
- **Android:** Java, Android Studio, Firebase Auth, Firebase Storage
- **Integrations:** Gemini API, ION API, Infor IDM, LangChain, RAG

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