Sanchitsai Nipanikar

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Education

·Bachelor of Technology in Computer Engineering – SPPU *2022-26*
Vishwakarma Institute of Technology, Pune CGPA: **8.43**

·Higher Secondary Certificate - TSBIE *2020-22*
Narayana Junior College, Kondapur, Hyderabad **92.50%**

·Secondary School Certificate - CBSE *2019-20*
Sant Tukaram National Model School, Latur **95.60%**

Experience

·Web Development Intern | *3 months* *Mar - May 2025*
CORAZON HOMES Pvt. Ltd. *Hybrid*
  – Redesigned and optimized (SEO) the company's real estate website using the MERN stack as part of an industry-sponsored project, leading to 5 - 10% improvement in search engine visibility and a ~10% increase in organic traffic.
  – Built key modules including property listings, user authentication, advanced search filters, a booking interface, and an admin dashboard

Courses

- Python for Data Science, AI & Development - IBM
- Fundamentals of Deep Learning - NVIDIA
- Building RAG Agents with LLMs - NVIDIA
- Introduction to Transformer-Based NLP - NVIDIA
- Deep Learning Specialization - DeepLearning.AI
- AWS Cloud Technical Essentials - AWS

Key projects

·Face Recognition-Based Attendance System | *Computer Vision* *3rd sem,2023*
Published in Springer, *series: Advances in Information Communication Technology and Computing (AICTC 2024)*
  – Developed a facial recognition attendance system using OpenCV (Haar + LBPH), achieving 90%+ recognition accuracy across 40+ student test cases in varied lighting.

·Flex Sensor Controlled Prosthetic Hand using Wireless Communication | *Microprocessors + CAD*
Patent published, *Intellectual Property India* *4th sem,2024*
  – Constructed a real-time wireless prosthetic hand, integrating flex sensors for motion detection and control, achieving a 95% accuracy rate in replicating hand gestures.

·A Multimodal Anonymization Framework for MP4 Videos | *Computer Vision + AIML* *5th sem,2025*
Awarded best paper of the Session at IEEE *International Conference on Emerging Smart Computing & Informatics (ESCI 2025), Pune.*
  – Engineered a multimodal anonymization framework for MP4 videos to ensure end-to-end privacy by integrating OCR for text redaction, GANs for facial anonymization, and audio processing for voice alteration.

·SigLIP-Gemma-2.4B: Lightweight Multimodal Vision-Language Model | *Vision-Language LLM & SLM*
6th sem,2025
  – Assembled a lightweight vision-language model by integrating SigLIP-400M and a 2.4B-parameter Gemma decoder, enabling downstream tasks like RAG and visual reasoning.
  – Achieved 141.9 CIDEr on image captioning and 83.19% VQA accuracy, with sub 200ms average latency per query using efficient inference paths.

Technical Skills

Languages:	C, C++, Python, HTML/CSS, SQL
Frameworks & Libraries:	PyTorch, OpenCV, NumPy, Pandas, TensorFlow, Keras, Matplotlib, Scikit-learn
Databases:	MySQL, MongoDB
Cloud & DevOps:	Azure, AWS, Docker, Kubernetes

Core technical competencies

- Data Science & Machine Learning
- Algorithms & Data Structures
- Operating Systems
- Computer Networks
- Database Management Systems
- Digital Electronics & COA
- Compiler Design
- ToC

Course Projects

·Aerial2Map: Pix2Pix-based Satellite-to-Map Translation | *Artificial Intelligence*

Tech stack: *PyTorch, PatchGAN, Python.*

- Constructed a Pix2Pix GAN for satellite-to-map translation using a U-Net generator and PatchGAN discriminator, trained on 256×256 RGB images for 20 epochs.
- Refined Pix2Pix GAN architecture implementing BCEWithLogits loss function alongside L1 reconstruction loss, achieving a 30% improvement in map realism based on visual and human evaluation metrics.

·DNA Data Compression: compression algorithm for genomic sequencing data | *Algorithms*

Tech stack: *C++, Python.*

- Implemented a DNA-specific compression system using predictive Markov modeling and arithmetic coding techniques. Analyzed domain characteristics to compare general-purpose (e.g., GZIP) vs. specialized compression methods for genomic data.
- Designed and tested compression algorithms for DNA FASTA/FASTQ files, achieving ~2–3× size reduction compared to GZIP, while maintaining 100% data fidelity.

·Facilitator: WhatsApp-Google Workspace Automation Backend | *Software Design and Modeling*

Tech stack: *Python, Flask, OpenAI, Google Cloud Platform, Google Workspace, Ngrok, OpenTelemetry, Grafana*

- Built a Flask-based automation backend for WhatsApp–Google Workspace, integrating OpenAI NLP and regex parsing to process 500+ messages/day with 95%+ intent accuracy.
- Streamlined calendar and Drive automation, reducing scheduling time by ~80%, with 99.9% uptime and real-time monitoring via OpenTelemetry and Grafana.

Other activities and Interests

- Current college team captain for Table Tennis and Tennis, playing at University level.
- Played Tennis at state level for CBSE for U14 and U17.
- Secured Gold medal for sketching in Indian Art Contest and certificate of appreciation (2024).
- Active artist, athlete and love binging academy award winning movies and series.