Shubh Rajiv Sudan

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Education

Rochester Institute Of Technology — Rochester, NY
Masters In Artificial Intelligence | GPA: 3.9/4.0 — *Aug. 2025 – Present*

Symbiosis Institute Of Technology — Pune, IND
Bachelors In AI & ML | Honors in Cloud Computing — *Aug. 2021 – Aug 2025*

Technical Skills

Languages: Python, SQL, C++, JavaScript
Machine Learning: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy
AI Concepts: Generative Adversarial Networks (GANs), Deep Learning (CNN, LSTM), NLP, Computer Vision
Cloud & DevOps: AWS, Microsoft Azure, Google Cloud, Git/GitHub, Render
Web & Databases: Flask, REST APIs, React, Node.js, MySQL, MongoDB, SQLite
Analytics: Power BI, Microsoft Excel, Snowflake

Experience

Diacto Technologies Pvt. Ltd. — Pune, India
Research And Development Intern — *Aug 2024 – May 2025*

- Engineered an **XGBoost** classifier on **Google Cloud** to automate candidate screening, reducing manual review time by streamlining job role matching to their personality, deployed via **Render**.
- Integrated **Google Vision OCR** and **OpenAI APIs** into a medical mobile application to digitize patient records.
- Managed the procurement and configuration of **120+ mobile devices**, negotiating vendor contracts to optimize logistics for the organization.
- Led a team of 6 interns through the SDLC, collaborating with the **CEO** to align technical deliverables with business KPIs.

Projects

Medical Image Augmentation using WGAN | *Python, PyTorch, WGAN*, CNN — Aug 2025 – Dec 2025

- Engineered a **Wasserstein GAN (WGAN)** to synthesize high-fidelity medical images, creating a "Gold Standard" augmentation pipeline for scarce datasets.
- Architected an optimized CNN classifier by **doubling model depth** and replacing LRN with **Batch Normalization**, achieving peak accuracy of **80%**.
- Validated synthetic data efficacy by training a baseline model on WGAN-augmented samples, boosting baseline performance from **27% to 65%**.
- Optimized CNN model with authors image augmentation technique yielded an accuracy of **80%** whereas the optimized model with images augmented through WGAN yielded an accuracy of **75%**.

Wind Turbine Damage Prediction | *Python, TensorFlow, ResNet50, VGG-16* — Jun 2023 – Dec 2023

- Developed a predictive maintenance system using **Deep Learning** to classify turbine blade defects (erosion, edge damage) from inspection imagery.
- Benchmarked performance of custom **Sequential CNNs** against **Transfer Learning** architectures (VGG-16, ResNet), achieving optimal results with **ResNet**.
- Optimized model evaluation using **Precision, Recall, and F1-Score** metrics to minimize false negatives in critical damage detection.

Hinglish Chatbot Using BERT | *Python, PyTorch, Transformers, NLP* — Jun 2023 – Dec 2023

- Fine-tuned a **BERT** model on a large-scale **Code-Mixed (Hinglish)** corpus to engineer a context-aware conversational agent.
- Designed a custom **Encoder-Decoder** architecture to handle bilingual input sequences, achieving **80% accuracy** in intent recognition tasks.
- Processed unstructured text data using **Pandas** and custom tokenizers to optimize training pipelines for localized language nuances.

Certifications

Forward Learner Program | *McKinsey.org (Business Strategy & Leadership)* — Issued 2025