

RUDRANSH SHEKHAR

CONTACT

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SKILLS

- Programming Languages:**
Python, Java, C/C++, MySQL, HTML/CSS, Javascript, R, MATLAB
- AI, Machine Learning & Research:**
Deep Learning, Machine Learning, RAG, PyTorch, TensorFlow, Fine-Tuning, LLMs Model Inference, Agentic AI, Forecasting
- Cloud, Systems & Infrastructure:**
Flask, Socket.IO, MySQL, Nginx, Linux, Oracle OCI, Git/GitHub, SSH/SCP, DevOps
- Distributed Computing & HPC:**
Distributed Training (DDP), NCCL, PBS, HPC Clusters, Multi-GPU Training.
- Cross-Platform Development:**
Capacitor, Electron, CustomTkinter, UI/UX, Responsive Web Design

CERTIFICATIONS

- Climate Data Analysis - ECMWF
- Hyperspectral Data - NASA ARSET
- Monitoring Dust - EUMETSAT
- Remote Sensing - NASA ARSET
- HSAF Products - EUMETSAT

LANGUAGES

- English (Fluent)
- German (Elementary)
- Hindi (Native)

PROFILE

B.Tech CSE student at VIT Chennai, Founder of mySphere, and AI/ML Intern at IMD. Building cloud infrastructure, AI systems, and cross-platform applications with experience in deep learning, HPC, distributed systems, and scalable backend engineering.

PROJECTS & EXPERIENCE

- India Meteorological Department (IMD)

2025 – Present

 - AI/ML Intern**

May 2026 - June 2026

 - Fine-tuned Huawei's Pangu-Weather model on 3.5 years of IMD GFS data and optimized training workflows, reducing epoch time from ~20 minutes to ~8 minutes.
 - Contributed to Pangu-Lite, an internally developed weather forecasting model trained on 40+ years of ERA5 data, reducing training time from ~32 hours to ~5 hours per epoch through distributed computing and pipeline optimization.
 - Implemented Distributed Data Parallel (DDP), NCCL-based multi-GPU training, PBS scheduling, checkpointing, early stopping, and experiment tracking on IMD's Arunika HPC cluster.
 - Developed Agentic AI weather forecasting systems integrating RAG, Zephyr, Gemma, and IMD meteorological datasets for natural-language weather query processing.
 - AI/ML Research Collaborator**

Aug 2025 - April 2026

 - Worked on Pangu-Weather model implementation, ONNX-to-PyTorch conversion, autoregressive forecasting workflows, and large-scale atmospheric data processing for AI-driven weather forecasting research.
 - Identified and resolved issues in model conversion pipelines, validating converted Pangu-Weather checkpoints through inference benchmarking and numerical consistency analysis between ONNX and PyTorch implementations.
 - Developed inference and validation pipelines using GRIB, GRIB2, and NetCDF datasets while working with Linux, HPC environments, cloud infrastructure, SSH-based workflows, and large-scale meteorological data systems.
- mySphere Ecosystem | Founder & Lead Developer

2025 – Present

 - Built myCloud, a distributed personal cloud platform enabling users to create self-hosted storage ecosystems using personal hardware.
 - Developed backend infrastructure using Flask, MySQL, Socket.IO, Nginx, Unicorn, and OCI, implementing secure authentication, real-time synchronization, and deployment automation.
 - Developed myTrade, a multi-agent AI investment analysis platform combining quantitative market analysis, LLM consensus, and human-in-the-loop decision workflows.
 - Developed myTune, a cross-platform music streaming application featuring intelligent queue management, recommendation systems, and ecosystem integration.

EDUCATION

- B.Tech in Computer Science Engineering (CSE) - 9.44 CGPA

2029

Vellore Institute of Technology (VIT), Chennai
- Senior Secondary (Class 12th) - 91.6%

2025

R.N. Public School, Prayagraj (CBSE Board)
- Senior Secondary (Class 11th) - 91.2%

2024

R.N. Public School, Prayagraj (CBSE Board)
- Secondary Education (Class 10th) - 96.8%

2023

St. Joseph's College, Prayagraj (ICSE Board)