

SUDARSHAN ANAND

AI/ML Researcher, Data Scientist

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EDUCATION

Georgia Institute of Technology Atlanta, GA, United States
MS Computational Science and Engineering (CGPA: 4.0/4.0) Aug 2024 – May 2026

Birla Institute of Technology and Science (BITS Pilani) Pilani, Rajasthan, India
MSc. Mathematics and B.E. Computer Science (CGPA: 9.4/10) Aug 2019 – Aug 2024

EXPERIENCE

Rezolve.ai - AI Product Development Intern Jun 2025 – Aug 2025

- Engineered an enterprise **Retrieval-Augmented Generation (RAG)** search MVP using **FastAPI, Pinecone, and PostgreSQL**, integrating conversational memory to slash policy retrieval to **<20-second latency** and drive strategic interest from tier-one tech firms.
- Optimized platform UI/UX for employee onboarding by developing a **prefix-tree look-ahead search** for instant autocomplete suggestions, automating global trend pipeline updates via **GCP Cloud Run**.
- Architected an **Agentic AI ChatOps system** (Slack/Teams) to automate the IT incident response lifecycle, streamlining **alert triaging and dynamic runbook generation**, attracting pilot interest from leading **ITSM providers**.

Qure.ai Technologies Pvt. Ltd. - AI Scientist Intern Jan 2024 – Jun 2024

- Optimized a **computer vision lung nodule detection** product, boosting AI-to-radiologist correlation by **~45%** to ensure strict clinical reliability for early cancer diagnosis.

AI & DATA SCIENCE RESEARCH PROJECTS

Multimodal Progression Tracking of Neurodegenerative disorders Aug 2025 – present

- Architecting a multimodal **Concept Bottleneck Model (CBM)** to track Parkinson's progression, fine-tuning foundational models on **3,000+ 3D MRI scans** via **mixed-precision training** for clinical interpretability.
- Scaling **distributed PyTorch pipelines** across **HPC environments using SLURM**, optimizing the processing and training times for massive longitudinal patient cohorts.

Investigating importance of Patient Metadata in Public Health May 2025 – present

- Leading a retrospective clinical data science investigation** analysing **1.2M COVID-19 patient records** (2020-2025) to evaluate patient metadata quality to understand host-pathogen interactions for clinical interventions and pandemic resource planning.
- Executed large-scale data cleaning and statistical analysis on free-text clinical fields, identifying **94% data sparsity**, and presented findings at the IEEE-EMBS BHI 2025 conference ([abstract](#)).
- Benchmarked state-of-the-art LLMs, including **Gemma-2** and **Med-Gemma**, applying **Supervised Fine-Tuning (SFT)** for clinical entity extraction, establishing a **70% accuracy baseline** that quantified the impact of degraded metadata.

Samay: Time-series Foundational Models Library Jan 2025 – May 2025

- Developed **Samay**, an open-source Python library unifying 10 state-of-the-art **time-series foundational models** for forecasting, classification, and anomaly detection.
- Engineered flexible inference pipelines supporting both **zero-shot** and custom **fine-tuned** execution across diverse data formats, ensuring strict compatibility with **PyTorch 2.0+**.
- Validated framework robustness by evaluating all 10 integrated models against the **GiftEval benchmark**, matching industry-standard performance metrics.

HONORS & AWARDS

IEEE BHI 2025 Data Challenge Competition Champion Oct 2025

- Led the study design and development of **AI/ML-driven depression risk prediction**, winning the IEEE-sponsored competition (backed by NSF & Google).

PUBLICATIONS

Conference

- S. Anand**, M. Lee, and S. S. Vasan, 'Metadata makes Big Data useful for AI/ML-ready, equitable pandemic response', in IEEE-EMBS International Conference on Biomedical and Health Informatics 2025 1-Page Abstracts, 2025. (poster presentation)

Journal articles

- Shiksha, **Anand, S.**, Shekhawat, K., & Agrawal, K. (2025). Automated generation of circulations within a floorplan. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 39, e9. doi: [10.1017/S0890060425000022](https://doi.org/10.1017/S0890060425000022)
- Anshu, Balram Dubey, Sourav Kumar Sasmal, **Anand Sudarshan**; Consequences of fear effect and prey refuge on the Turing patterns in a delayed predator-prey system. *Chaos* 1 December 2022; 32 (12): 123132. <https://doi.org/10.1063/5.0126782>