

OMPRAKASH SAHANI

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PROFESSIONAL SUMMARY

Computer Science graduate focused on software engineering, ML systems, distributed training, performance engineering, and AI infrastructure. Built self-directed systems projects spanning transformer infrastructure, autograd engines, distributed training profiling, benchmark regression detection, reproducibility auditing, and experiment tracking. Strong programming foundation in Python, Java, C++, C, R, and SQL, with hands-on experience building reliable, performance-aware ML infrastructure tools.

EDUCATION

SANJAY GHODAWAT UNIVERSITY

Bachelor of Technology (B.Tech) | Major in Computer Science and Engineering
CGPA: 8.40/10.0 | First Class with Distinction

Kolhapur, MH
Jul 2020 – May 2023

MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION (MSBTE)

Diploma in Computer Engineering | First Class

Kolhapur, MH
Jul 2017 – May 2020

INDEPENDENT TECHNICAL EXPERIENCE

ML Systems Engineering Projects — Independent

May 2024 – Present

- Designed and developed 6+ systems-oriented machine learning projects focused on distributed training, performance engineering, benchmarking, observability, reproducibility, and AI infrastructure.
- Built ML infrastructure tools for communication profiling, scalability analysis, performance diagnostics, reproducible experimentation, benchmark regression detection, and software reliability.
- Created project documentation including architecture diagrams, benchmark results, performance analysis, and GitHub repositories to communicate design decisions and engineering trade-offs.

PROJECTS

ATLAS AI | OPEN ML SYSTEMS PLATFORM (Python, ML Systems, Transformers, Distributed Systems, Benchmarking)

- Designed and developed an open ML systems platform with 20+ interconnected components spanning training infrastructure, transformer systems, distributed runtime concepts, inference serving, observability, and benchmarking.
- Implemented autograd-based training workflows, transformer architecture components, communication profiling, performance diagnostics, and reproducible ML experimentation workflows.

DISTRIBUTED TRAINING PROFILER (Python, Distributed Training, Performance Analysis, Memory Profiling)

- Built a distributed training profiling and simulation framework for analyzing communication overhead, memory utilization, synchronization costs, and scalability bottlenecks in ML workloads.
- Implemented support for collective communication analysis, memory diagnostics, GPU fit analysis, ZeRO optimization analysis, and performance benchmarking workflows.

BENCHMARK GUARDIAN (Python, FastAPI, GitHub Apps, Benchmarking, Performance Monitoring)

- Built a benchmark regression detection platform for automated analysis of latency, throughput, memory utilization, and performance trends within software development workflows.
- Developed regression reporting, historical benchmark tracking, severity classification, and automated developer feedback capabilities to support performance-aware engineering decisions.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, C, R, SQL

Machine Learning: PyTorch, NumPy, Pandas, Scikit-learn, Deep Learning, Transformers

Systems: Distributed Systems, Distributed Training, Performance Analysis, Benchmarking, Observability, Scalability Analysis

Tools & Infrastructure: Git, GitHub, Linux, Docker, FastAPI, GitHub Apps, GitHub Actions, CLI Tooling