Saksham Arora

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EDUCATION

Indian Institute of Technology, Madras — Aug 2024 – May 2028 (Expected)
BS Degree in Data Science and Applications — *Chennai, India*

GGSIPU (Akhilesh Das Gupta Institute of Professional Studies) — Aug 2024 – May 2028 (Expected)
Bachelor of Technology in Computer Science and Engineering — *New Delhi, India*

AWARDS & ACHIEVEMENTS

- **IMC Prosperity 4 (Global Algorithmic Trading Competition):** Overall Rank **154 / 18,800+ teams worldwide** (top ∼0.8%); best individual rounds: R1 Rank 90, R3 Rank 84. github.com/zainy-477/imc-prosperity-4
- **Trinity College London:** Grade 8 Certification in Drums (highest grade).

PROJECTS

Low-Latency Matching Engine (HFT) | *C++20, Python* github.com/saksham10arora-dotcom/Simple-HFT-Engine

- Built a lock-free order-matching engine in C++20 sustaining **2.7M ops/sec** with **p99 latency of 900ns** via object pooling, cache-aligned data structures, and zero-allocation hot paths.
- Delivered a **3.31× throughput upgrade** over baseline by eliminating thread contention with lock-free queues and reducing cache misses on order-book operations.
- Authored **21 unit and integration tests** covering matching invariants, concurrency edge cases, and order lifecycle correctness.

LLM-bench - LLM Inference Benchmarker | *Python, CLI* github.com/saksham10arora-dotcom/llm-bench

- Built a multi-provider CLI measuring **TTFT, inter-token latency (p50/p95/p99), and throughput** across Groq, Anthropic, and OpenAI APIs with streaming support and provider comparison mode.
- Shipped 28/28 passing tests, validated live against Groq's inference API; handles token counting, warmup ordering, and ITL/throughput edge cases.

HFT Engine Benchmarking Platform (IICPC) | *Python, Docker, Terraform* github.com/saksham10arora-dotcom/iicpc-benchmarking-platform

- Designed a sandboxed multi-engine benchmarking platform with multiplicative scoring (correctness × completeness × speed blend) and 9 anti-cheat validators catching phantom-maker attacks and submission fraud.
- Diagnosed a TCP_NODELAY omission in own HFT wrapper via the platform; one-line fix yielded **27× peak throughput gain** (1,167 → 31,939 TPS). Shipped with GCP Terraform IaC and 25/25 tests.

EXPERIENCE

Airtel Xtelify — Jun 2026 – Jul 2026
Data Science Intern — *Remote*

- Building a recommendation system for Airtel's streaming platform, leveraging PySpark pipelines on large-scale subscriber data to power content discovery and personalised search.
- Developing FastAPI services for data access and analytics endpoints supporting the recommendation infrastructure.

Smart Mobility Hub (Prime Tower Infrastructure) — Jun 2026 – Present
Founding Data Scientist — *Remote*

- Built a rooftop solar ROI estimator (Streamlit) with end-to-end financial modelling: tariff analysis, system sizing, MNRE subsidy integration, payback period and CO_2 offset calculations.

Cimplifie Tech Solutions LLP — Oct 2024 – Present
Data Engineering & Automation Intern — *Remote*

- Designed and maintained ETL pipelines processing large-scale web-scraped datasets for AI-driven analytics workflows.
- Built Selenium-based web automation and scraping scripts, **reducing manual data-collection effort by 70%**.
- Automated business-intelligence workflows for lead-generation pipelines, reducing manual reporting overhead.

TECHNICAL SKILLS

Languages:	C++20, Python (NumPy, Pandas, PySpark, Scikit-Learn), SQL, C
Systems / Performance:	Lock-free data structures, object pooling, cache-aware layout, multithreading, memory alignment
Quantitative:	Linear algebra, inferential statistics, time-series analysis
Tools:	Git, Docker, Selenium, FastAPI, ETL pipelines, Linux

COMPETITIVE PROGRAMMING

LeetCode: C0SBYYY (1543 contest rating) | **CodeChef:** c0sbyyy (1760, 3★)