Aman Mehtar

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Summary

AI & Data Science engineering student who builds autonomous agents, developer tools, and full-stack products in public. Trains language models from scratch on consumer hardware, ships real-time applications, and self-hosts infrastructure end-to-end — from pretraining and quantization to React frontends and Go services.

Technical Skills

ML / LLMs: From-scratch pretraining & post-training, LoRA fine-tuning, quantization, evals
Languages: Python, TypeScript, Go, C/C++, Bash
Full-Stack: React 19, Next.js, React Native (Expo), FastAPI, Convex, OAuth, PostgreSQL / Drizzle
Systems: WebSockets / SSE, low-latency APIs, Docker, self-hosting, native Linux tooling
Vision & AI: YOLO, OpenCV, multimodal LLMs (Gemini, Phi-3.5-Vision), semantic / vector search

Education

University of Mumbai — Mumbai, India
Bachelor of Engineering in Artificial Intelligence & Data Science — *2023 – 2027*

Experience

contexIQ — Mumbai, India
AI / LLM Engineer Intern — *Jun 2024*
- Built an LLM-powered e-commerce semantic search system — Llama on Groq for intent parsing, Weaviate for cosine vector retrieval — selected as a winning internship project.

Microsoft Learn Student Club (MLSC), VCET — Mumbai, India
Development Coordinator & AIML Associate — *Aug 2024 – Present*
- Led a team of 4 in the Amazon ML Challenge 2024, coordinating end-to-end model development.
- Designed and deployed an FAQ chatbot for the MLSC Coherence Hackathon site.
- Coordinated MLSC hackathon operations and contributed to technical workshops.

ScienceKidz Educare Ltd. — Mumbai, India
Robotics Intern — *Jun 2021 – Sep 2022*
- Built obstacle-avoiding robots using IoT sensors and embedded systems (Robo-Doctor, Obstacle Avoiding Car).
- Developed an Android logistics-manager app to optimize company orders and delivery.
- Designed components with CorelDRAW and managed MDF & acrylic laser-cutting fabrication.

Projects

LLM & chessLLM | *Python, PyTorch* — GitHub
- Pretrained a 101M-parameter LLM from scratch on an 8 GB consumer laptop GPU.
- Built chessLLM, a 94M model that forms an internal board from move text alone — linearly probeable to 85.6% accuracy.

Multi-Agent Firmware Repurposing | *Claude Code, Antigravity, Linux* — Writeup
- Orchestrated two autonomous coding agents (DeepSeek V4.1 via Claude Code, Gemini 3.8 Flash via Antigravity) to root and repurpose a decommissioned gateway into a self-healing Wi-Fi repeater end-to-end.
- Adjudicated a false-negative vendor diagnostic by cross-checking model outputs in a human-in-the-loop workflow, identifying root causes to achieve a working deployment.

neo-aman-code | *TypeScript, Vercel AI SDK, OpenTUI* — GitHub
- Developed a terminal AI coding agent using a custom multi-step tool loop over the AI SDK with file/shell/web tools, multi-provider model routing (AI Gateway, LiteLLM, Bedrock), and a React TUI.

disk-agent | *TypeScript, Pi SDK, Node.js* — GitHub
- Published npm personal AI-agent gateway (`@amanm/disk-agent`): enabled chat control via Telegram or CLI with persistent memory, cron/heartbeat automations, and local agentic tool loops.

Amazon ML Challenge — Vision & Pricing Models | *PyTorch, Phi-3.5-Vision, Qwen, LoRA* — GitHub
- Finetuned Phi-3.5-Vision VLM to extract product attributes from images, engineering normalization rules reaching 95% accuracy (2024 challenge).
- Engineered price-prediction pipeline using 4-bit LoRA on Qwen with a monotone quantile head on consumer hardware (2025 challenge).

Volunteering

National Service Scheme (NSS), VCET — Mumbai, India
Technical Volunteer — *Aug 2024 – Present*
- Designed social-media creatives to grow NSS VCET's digital presence; participated in community service drives.