



AADIT AGRAWAL

Computer Science Engineer
AI/ML · HPC · DevOps · Security

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LANGUAGES
Python, C/C++, TypeScript, JavaScript, Rust, Go, Zig, Bash/Zsh, SQL, Java, Kotlin, C#, Lua, Swift, Haskell, Nix, LaTeX, Typst

FRONTEND
Next.js, React, Svelte, Vue, Astro, Tailwind, Radix, shadcn/ui

BACKEND
Node.js, Bun, Deno, Express, tRPC, FastAPI, Flask, Django

DEVOPS
Docker, Kubernetes, Proxmox, Linux, Git, GitHub Actions, Ansible, Terraform, Pulumi

NETWORKING / MONITORING
Tailscale, WireGuard, Nginx, Caddy, Traefik, HAProxy, Grafana, Prometheus, Loki

CLOUD
AWS, GCP, Azure, Hetzner, Cloudflare Workers, Vercel, Fly.io, Supabase, Convex

AI / ML
PyTorch, JAX, Transformers, DeepSpeed, FSDP, Ray, W&B, OpenCV, YOLO, Detectron2, LangChain, Haystack

LLM / HPC
SGLang, vLLM, llama.cpp, TensorRT-LLM, MLX, Ollama, CUDA, RDMA, Slurm, NCCL

DATABASES
PostgreSQL, MariaDB, MongoDB, SQLite, Redis, ChromaDB, pgvector, Milvus

ARCHITECTURE
ARM64, Apple Silicon, Jetson, AMD64/x86-64, RISC-V, SIMD

SECURITY
Wireshark, Burp, Nmap, Metasploit, Ghidra

EDUCATION

Manipal Institute of Technology · BTech – CCE, MAHE

Jul 2023 – May 2027

EXPERIENCE

Head Student Researcher · CASIR, MAHE

May 2025 – Present

- › Architected HPC cluster (96-core Threadripper 7995WX, 48GB A6000, 256GB RAM) – 1,500+ daily inference req, 99.2% uptime.
- › Leading \$50K+ Apple Silicon + NVIDIA Blackwell cluster; optimising for ARM64 + CUDA.
- › Agentic RAG pipeline with visual indexing + layout-aware OCR – 2,000+ docs, 94% accuracy, 3× faster than the pre-existing solution..
- › LLM semantic translator (IEC 61131-3 → IEC 61499) cutting PLC migration by 70%.
- › Real-time CV on Jetson + DJI drone – 30fps edge inference via RTMP.
- › 3 production AI systems; 2 peer-reviewed publications in progress.

DevOps Engineer · Pixa AI, Bengaluru

Dec 2025

- › Cloud infra + CI/CD for AI apps; 99.5% deploy success across 2 releases.

Web and Design Engineer · Rossmann New Media 2 Inc.

Jan 2026 – Present

- › Worked on the website optimisation and redesign for rossmanngroup.com. Moved it into top 5 for SEO from being off the top 100.

Founding President · PRISM

Jan 2026 – Present

- › Research club (AI/ML, HPC, DevOps, Biotech, InfoSec) – 150+ members. Academic Advisory Board for AI Curriculum and Adoption.

Management Committee · MIST

Oct 2023 – Jun 2025

- › CTF infra for 300+ users, 100% uptime; cut costs by 80%.
- › 12+ workshops for 150+ participants; top 10% national CTFs.

RESEARCH

FL + Digital Twin for Route Optimisation · SCE, MAHE

Jun 2024 – Jul 2025

- › GPS telemetry (500K+ datapoints); dashcam CV via OpenCV + YOLO → 12,000+ labelled samples.

PROJECTS

Homelab Infrastructure · Self-hosted cloud

2022 – Present

- › 70+ services on Proxmox/Docker – 98% uptime, 4 yrs, 8TB MergerFS, Blackwell-GPU, 3-2-1 backups.
- › Fine-tuned models for security (30fps) + 4K transcoding; 95% CPU → GPU.
- › Mitigated live DDoS (50K+ req/min); 95% attack surface reduction.

The TIK Menu API · GitHub

2024 – 2025

- › 5,000+ DAU, 150K+ monthly req, campus adoption <7 days. REST API + Cloudflare R2.

Coolstuff.work Forgejo

2023 – 2025

- › **OR-Free**: Free AI model tracker on OpenRouter; real-time availability and pricing dashboard.
- › **Contact Cards + Mass Contact Maker**: vCard QR generator + bulk VCF creation from Excel sheets.
- › **Campus Directory**: Crowdsourced campus contact hub with real-time status and fuzzy search.
- › **MIT Courses Search**: Course discovery with interactive physics graph (500+ nodes), fuzzy search. Next.js 15, Radix UI, Fuse.js.
- › **transcript-cli**: Multi-runtime video transcription CLI tool.
- › **Sindhi Menu**: Cyclic mess menu viewer.
- › **Vesper for Fleet**: IDE theme port.