Akash Ainapur

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Education

MVJ College of Engineering, Bengaluru · *B.E. in Computer Science and Engineering* — CGPA: **9.01**/10 | 2023 – 2027 (expected)
Shri Marikamba PU College, Sirsi · *Class XII (Pre-University)* — **95%** | 2021 – 2023
Shri Marikamba High School, Sirsi · *Class X (SSLC)* — **98%** | 2021

Technical Skills

Languages: Python, C++, C, Java, JavaScript, SQL
AI / ML: LLM APIs (Gemini, Groq, OpenRouter), structured output, tool use, search grounding, OpenCV, ONNX Runtime, scikit-learn, OR-Tools
Backend & DevOps: FastAPI, Flask, REST, SSE, Docker, GitHub Actions, Kubernetes (Minikube), MongoDB, SQLite, Vercel, Render
Hardware & Automation: Arduino, stepper motion control, serial protocols, sensors and relays, n8n, Telegram bots
Creative: Premiere Pro, After Effects, Photoshop, Canva: video editing, VFX, graphic design, photography

Experience

Marketing Intern, Aerobiotix India (hospital air-disinfection systems) — Aug 2026 – Present
- Plan and produce weekly LinkedIn and Instagram posts and carousels for a B2B healthcare-hardware company, turning technical product claims into source-checked messaging for doctors and hospital decision makers.

Web Development Intern, CEQUE | Case study — Mar 2025 – Jun 2025
- Built responsive WordPress pages, configured plugins (forms, SEO, performance, security), fixed layout, broken-link and mobile issues, and optimized images, testing every change on desktop and mobile.

Social Media Intern, Vahani Scholarship Trust — Aug 2024 – Feb 2025
- Ran SEO and hashtag strategy across Instagram and LinkedIn, lifting engagement by **5%** and story interactions by **20%**.

Projects

KRISHIBODH: AI-Integrated Gantry Farming Robot | GitHub · Case study — **Best Track Prize, IOTOPIA 2025**
C++ (Arduino), Python, Flask, OpenCV, Gemini API
- Built a **4-axis Cartesian farming robot** (NEMA 17 steppers, dual-motor X gantry): Arduino C++ firmware runs acceleration-limited moves and a 6-command serial protocol with a mid-move manual override, watering a plant only when its soil reads dry.
- Wrote a **thread-safe Python control plane** whose background serial listener triggers top + side camera capture on the firmware's ready signal; U²-Net segmentation with an HSV fallback scores leaf health across **96 captures in 13 logged experiment runs**.
- Added a **Gemini assistant** that maps plain English ("Plant 2 is dying") to schema-constrained robot commands and answers farming questions, citing Google Search when quota allows; it also turns a hypothesis into a JSON experiment protocol the robot executes.

AI-Driven Auto Deployment Tool | GitHub — **Team project**
FastAPI, React, Docker, GitHub Actions, Kubernetes, MongoDB
- **GitHub URL in, running app out**: detects the stack with a confidence score, generates a Dockerfile (7 language templates + LLM fallback) and a GitHub Actions pipeline to GHCR, deploys to Kubernetes (Minikube), streams logs over SSE, and turns failed CI logs into a one-click LLM patch.
- Fixed GHCR image-naming and entry-point path bugs that broke deploys from non-owner accounts; audited the paper's claims against the code, found "success" counted pods *running* rather than apps *responding*, and redesigned the evaluation; **co-authored the resulting IEEE paper** (under review).

ReportGen: AI Project-Report Generator | GitHub
React, Flask, Gemini API, python-docx, Clerk
- Shipped a web app that turns a short form into a complete **university-format project report (.docx)**: cover, certificate, declaration, acknowledgement, auto-updating TOC and AI-written chapters, with autopilot and directed modes and rate-limited Gemini calls to survive free-tier quotas.

Fake-News Detector | Live · GitHub
FastAPI, Gemini, Google Search grounding, Pydantic
- Replaced a BERT classifier that flagged *genuine recent news* as fake with an LLM that answers REAL / FAKE / **UNCERTAIN** with a confidence score and checks claims against Google Search when quota allows.
- Made it degrade gracefully on a free API tier: quota-aware search with a UI notice, plus multi-model fallback on overload, cutting live response time from **27 s to ~4 s**; ISOT eval harness scores abstentions separately.

Also built: Instagram auto-publisher (n8n, Graph API v22, Telegram trigger) · CoSafar ride-pooling optimizer (DBSCAN + OR-Tools vehicle routing, Project Expo 2026) · Notion → Blogger → LinkedIn content pipeline (Flask, Gemini)

Achievements

- **Vahani Scholar**: one of **50 students in India** selected for a full scholarship covering undergraduate education.
- **Best Track Prize, IOTOPIA 2025** national-level hackathon, REVA University, for the KRISHIBODH smart-irrigation robot. Post
- **Co-author, IEEE conference paper (under review)** on LLM-driven automated deployment and its failure modes.
- **Open-source contributor, browser-use/web-ui** (16k+ GitHub stars): fixed a Docker build failure on Debian Trixie; merged by the maintainer. PR #685
- **GDG On Campus Tech Team**: selected as 1 of 3 from 70+ applicants.

Leadership & Activities

- **Team Lead, Vahani AI & Automation Bootcamp**: co-designed and led a nationwide AI and n8n bootcamp for **~100 Vahani scholars**, rated **4.64/5**, with participants asking for 2–3 more sessions. Case study
- **Design Lead, NIC** (technical club) and **Sub-team Lead, Swayam Media Team**, MVJ College of Engineering.
- **Freelance Video Editor & VFX Artist**: client work for college clubs and events; best reel **3M+ views**. Portfolio