

Utkarsh Gupta

+91-9889912521 | utkarsh.gupta7799@gmail.com | linkedin.com/in/utkarsh-gupta-5b7b141b3 | github.com/UtkarshGupta7799 | leetcode.com/u/UtkarshGupta01 | Portfolio

PROFESSIONAL EXPERIENCE

CausalFunnel

Jan 2026 – Present

Full Stack Developer – AI Products | Remote

- Owned the end-to-end development of **AI-powered marketing systems** across Google Ads, SEO/GEO, and conversion optimization, spanning backend APIs, model orchestration, secure integrations, and customer-facing React workflows.
- Architected a **natural-language Google Ads agent** using TypeScript, Fastify, PostgreSQL, and Google Ads APIs to audit performance, conversion tracking, search-term waste, budgets, and bidding strategies.
- Enabled controlled campaign creation and optimization through **editable drafts, schema validation, human approvals, audit trails, and asynchronous execution** with provider read-back verification.
- Built a **multi-tenant WordPress SEO automation agent** using Fastify, Prisma, PostgreSQL, Redis, and BullMQ, with secure draft, publish, public-page verification, and automatic rollback workflows.
- Extended the SEO platform with **Generative Engine Optimization** to scan domains and sitemaps, evaluate visibility across multiple AI search surfaces, and measure brand mentions, citations, competitors, and answer quality.
- Shipped an **agentic CRO insights workflow** combining traffic, heatmaps, user journeys, and funnel signals to generate targeted nudges, A/B-test variants, and landing-page improvements under human-controlled deployment.

Cynapto Technologies

Jun 2025 – Nov 2025

AI Intern | Remote

- Designed an end-to-end **audiovisual synchronization pipeline** using bidirectional LSTM networks, covering temporal feature preparation, model training, inference, and evaluation.
- Improved synchronization accuracy by **30%** through experiments with sequence windows, model configurations, and audiovisual feature-alignment strategies.
- Profiled and optimized **NeRF rendering pipelines**, reducing processing time by **25%** while balancing rendering speed, memory consumption, and visual quality under constrained compute.

PERSONAL PROJECTS

TrendForge | [GitHub](#) | [Live](#)

Python, Probabilistic Sampling, Large-Scale Data Processing

- Architected an **approximate query-processing engine** capable of analyzing datasets containing **100M+ records** without requiring complete scans for every query.
- Implemented probabilistic stream sampling with measurable accuracy bounds and built a benchmarking suite covering latency, throughput, sample size, and approximation error.
- Achieved up to **5× faster query execution** with controlled accuracy loss and translated the findings into **two co-authored research publications**.

Galenos | [GitHub](#) | [Live](#)

Python, Phi-3, QLoRA, Socket.io, NVIDIA T4

- Built an end-to-end **domain-specific AI assistant** covering data preparation, model fine-tuning, GPU-optimized inference, and real-time response delivery.
- Fine-tuned a **3.8B-parameter Phi-3 model** using QLoRA and 4-bit quantization, enabling inference within the **15 GB memory limit of an NVIDIA T4 GPU**.
- Engineered a **Socket.io-based streaming layer** and optimized model loading and context handling to balance response quality, latency, and constrained compute resources.

TECHNICAL SKILLS

Networking & Web Internals: DNS, HTTP/HTTPS, TLS, TCP, Reverse Proxying, WebSockets, Nginx, Network Debugging

Languages: TypeScript, JavaScript (ES6+), Python, Java, C++

Full-Stack & APIs: React.js, Next.js, Node.js, Express.js, Fastify, FastAPI, Flask, REST APIs, Webhooks

Backend & Distributed Systems: Microservices, Event-Driven Architecture, Apache Kafka, BullMQ, Background Workers, Caching

Databases: PostgreSQL, MongoDB, MySQL, Redis, Prisma, Query Optimization, Indexing

Authentication & Security: JWT, OAuth 2.0, Auth0, RBAC, bcrypt, Tenant Isolation, Rate Limiting, SSRF Protection

Cloud & DevOps: AWS (EC2, S3), Docker, Docker Compose, GitHub Actions, CI/CD, Linux/Bash

Integrations: Google Ads API, WordPress API, Shopify API/Webhooks, Stripe, Razorpay, Socket.io

AI & LLM Engineering: Multi-provider LLM APIs, RAG, QLoRA Fine-Tuning, Prompt Engineering, Tool Calling

Testing & Core CS: Pytest, Jest, Vitest, Postman, Integration Testing, Data Structures & Algorithms, OOP, System Design

ACHIEVEMENTS

- Ranked in the **top 0.1%** of an industry-sponsored Kaggle machine-learning competition among **2,700+ submissions**.
- Achieved **Expert rank on Codeforces** with a peak rating of **1669** and solved **750+ LeetCode problems** across data structures, algorithms, and system design.
- Advanced to the finalist round of **Code with Cisco**, earning recognition among the top candidates evaluated for a Software Engineer role.
- Qualified **GATE Computer Science in 2025 and 2026**, placing among the **top 5% of candidates** in the national-level examination.

EDUCATION

JSS Academy of Technical Education, Noida

2022 – 2026

Bachelor of Technology in Computer Science and Engineering

- CGPA: 8.0/10 | Graduating 2026