KUNJ GUPTA

📞 +91-6290679821 | 📍 Kolkata | ✉ kunj7dgupta@gmail.com | 💼 LinkedIn | GitHub | 👤 Portfolio | 📊 Coding Profiles

EDUCATION

Bachelor of Technology (B.Tech) - Computer Science and Engineering (Artificial Intelligence) *2022 - 26*
Institute of Engineering & Management, Kolkata, India (IEM) **CGPA: 9.23**

EXPERIENCE

Goldman Sachs Bengaluru, India
Summer Analyst **May 2025 - Jul 2025**
- Refactored **5000+ LOC legacy backend** to a **modern architecture** using **GitFlow**, improving efficiency, reliability, & code quality.
- Reduced execution time from **11 minutes** to **1.5 seconds** (**440× faster**) by optimizing **database queries** and **computation logic**.
- Tech Stack: **Java**, Elasticsearch, Kibana, SLang, JUnit, GitLab.

Syntalix | [*Letter of Recommendation*] Remote
Backend Lead **Mar 2023 - Dec 2024**
- Engineered scalable backend **microservices**, including **real-time data processing, caching mechanisms**, and third-party API integrations, using **distributed systems** architecture and **Agile**, ensuring high scalability and performance, with **99.9% uptime**.
- Spearheaded key backend features for an **e-commerce** platform using **MERN** stack, improving API response time by **40%.**
- **Led a team of 2** and integrated Google Ads campaign into CRM, adapting strategies to boost **ROI by 35%** over several months.
- Tech Stack: MERN, Fastify, NestJS, Postgres, Redis, RabbitMQ, Stripe, Flask, Cloudinary, Firebase, TypeScript, Appwrite.

IEM Research Cell Kolkata, India
Junior Researcher **Dec 2022 - Sep 2023**
- Designed a **MERN** server for **real-time data processing** and integration with **drone** systems & **deep learning** algorithms, trained to identify **20+ animal species**, automating detection of **deforestation, poaching, forest fires & wildlife monitoring.**
- Reduced **operational costs** by up to **15%** and **manual intervention** by **80%** by addressing an ambiguous, open-ended problem — designing an **autonomous surveillance system** to replace fixed cameras that deteriorate over time.
- Authored a **patent**, won **3+** project exhibitions, gained experience with microcontroller programming and drone prototyping.

PROJECTS

AI-Based Business Risk Intelligence System *(FastAPI, Streamlit, MongoDB, Gemini API)* *Website* | *GitHub* | *Apr 2025*
- Spearheaded a **distributed, multi-tiered AI system** using asynchronous **FastAPI** and orchestration of **4+ specialized agents**, enabling real-time insights via a conversational bot, cutting **manual analysis** by **64%** and boosting **risk accuracy** by **25%**.
- Directed a responsive **Streamlit** frontend with project creation, **historical chat retrieval**, and interactive dashboards visualizing **KPIs** like health score, risk breakdown, and timelines, accelerating **project evaluation** by **35%**.

Full-Stack Food Delivery Web App *(Express.js, React, Cloudinary, MongoDB, Mailgun, Paypal)* *Website* | *GitHub* | *Nov 2024*
- Orchestrated a **food delivery app**, implementing **20+ features** like user auth, cart, order history, drafts, & profile updates.
- Implemented **payment** page features with **PayPal** integration & **OpenStreetMap**, improving location tracking accuracy by **15%**.

Facial Recognition Door Security System *(Debian OS, Python, DeepFace, OpenCV, Miniforge)* *Demo* | *GitHub* | *Feb 2024*
- Designed a **Raspberry Pi**-based facial recognition door lock system integrating deep learning algorithms with **96.5% accuracy.**
- Enabled real-time communication with owner via **SMS alerts** and **OTP verification** for unrecognized faces sent **within 2 seconds**.

ACHIEVEMENTS

- Secured a SWE Internship at **Goldman Sachs**, selected among the **top 50** candidates from over **1,00,000+** applicants (off-campus).
- Achieved **Specialist (1494)** rating on **Codeforces**, with a **Global Rank of 218** in Codeforces Round 1043.
- Achieved a maximum rating of **1519** on **CodeChef**, with **Global Ranks 389** and **521** in Starters 153 and 179.
- Earned a **Finalist** position in the **YUKTI** (MoE) Innovation Challenge 2023, ranking among the **Top 100** startup ideas in India.
- Placed **2nd nationally** for the **Young Engineer's Award 2023** issued by Institution of Engineering and Technology (**IET**).
- **Qualified PRMO 2019** - Maths Olympiad Organized by HBCSE and MTA; ranked among the **Top 300** regionally.

SKILLS

Languages: C/C++, Java, Python, JavaScript, TypeScript, Bash, HTML, CSS, SLang (Goldman Sachs)
Tools & Frameworks: Git/GitHub/GitLab, Git Flow, JUnit, NodeJS, ExpressJS, Fastify, REST APIs, Flask, FastAPI, Postman, Agile, Jira, Confluence, Docker
Databases: MongoDB, Redis, Elasticsearch, Relational - PostgreSQL, MySQL, Oracle SQL, IBM DB2
Cloud Services: Amazon Web Services (AWS), Render, Firebase, Cloudinary, Twilio, Mailgun, Google Cloud
Operating Systems: Microsoft Windows, Unix/Linux - Ubuntu, Kali, Bookworm (Debian)
Relevant Coursework: Data Structures & Algorithms, System Design, Operating Systems, Object Oriented Programming, DBMS, COA, AIML, NLP, Cloud Computing, Computer Networks, IoT, MATLAB, Cyber Security, Complexity Analysis

PATENTS AND PUBLICATIONS J=Journal, P=Patent

[P.1] Kunj Gupta, et al. (2023). **Aerial Forest Ranger**. Indian Patent Office, Patent No. 202331066476. Status: RQ Filed.

[J.1] Arkaprabha De, Kunj Gupta, et al. (2023). **Poseidon: Surface Water Garbage Collector**. *International Journal of Innovative Research in Physics*, Vol. 4, Issue 2, pp. 27-31. DOI: 10.15864/ijiip.4205.

EXTRACURRICULAR

- **Technical Blog**: 'Printf/Cout in C/C++ GCC: Decoding the Confusing Outputs'. [Medium]
- Completed an intensive **30-day** long hands-on workshop on **Cloud Computing** and **Generative AI** by **Google**. [Certificate]
- Earned various accolades in Table Tennis (District-level), Basketball and Swimming (10+ years).