

# KUNJ GUPTA

Backend Web Developer  
Third Year Undergraduate  
Computer Science and Engineering

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## EXPERIENCE

### Syntalix | Backend Developer

Mar 2023 - Present

AI Startup and Consultancy

[\[Website\]](#)

- Designed and developed complex backend systems, including **real-time data processing**, **caching mechanisms**, and third-party API integrations, ensuring high scalability and performance.
- Designed and implemented key backend features for an **e-commerce** platform in **MERN** stack.
- Led a team of 2** and executed Google Ads campaign for a client, thereby increasing **ROI by 35%** over several months.
- Languages and Libraries: MERN, Fastify, NestJS, Postgres, Redis, RabbitMQ, Stripe, Flask, Cloudinary, Firebase, Typescript

### IEM IEDC | Junior Researcher

Dec 2022 - Sept 2023

Research and Development lab of IEM, Kolkata

[\[Website\]](#)

- Implemented a **MERN** server to support **real-time data processing** and integration with **drone** systems & **deep learning** algorithms for Aerial Forest Ranger project, automating detection of **deforestation**, **poaching**, **forest fires** & **wildlife monitoring**.
- Reduced **operational costs** by up to **15%** and **manual intervention** by **80%** compared to traditional surveillance methods by reducing the reliance on fixed cameras that deteriorate over time.
- Filed a **patent** and won **3+** project exhibitions, and learnt microcontroller coding and basics of drone building.
- Languages and Libraries: MERN, Arduino, Esp32.

## EDUCATION

### B.Tech - Computer Science and Engineering (Artificial Intelligence)

2022-26(exp.)

Institute of Engineering and Management, SaltLake, Kolkata, India

**CGPA: 9.30**

### AISSCE - PCM with Computer Science (Senior Secondary)

2019-21

Delhi Public School, Ruby Park, Kolkata, India

**93.2%**

## PROJECTS

### BitsnBite

[Website](#) | [Github](#) | Nov 2024

- Built a **food delivery app**, implementing user authentication, cart management, order history, drafts, and profile updates.
- Implemented **payment** page features with **PayPal** integration & **OpenStreetMap**, improving location tracking accuracy by **15%**.
- Languages and Libraries: Node, Javascript, React, Express, Cloudinary, MongoDB, Mailgun, PayPal SDK.

### KawniX Flow

[Website](#) | Aug 2024

- Developed an interactive **flowchart tool** for visualizing code structures with drag-and-drop functionality, optimized to handle complex flowcharts up to **100 nodes** while maintaining sub-second response times, reducing **diagram creation time by 42%**.
- Languages and Libraries: React, JavaScript, OpenAI API, React Flow, React DnD, Tailwind CSS.

### PiGuard

[Demo](#) | [Github](#) | Feb 2024

- Developed a **Raspberry Pi**-based facial recognition door lock system integrating deep learning algorithms for secure access.
- Real-time communication with the owner via **SMS alerts** and **OTP verification** for unrecognized faces sent **within 2 seconds**.
- Languages and Libraries: Debian-based Bookworm OS, Python, DeepFace, OpenCV, NumPy, Twilio, Miniforge.

### The Continental

[Github](#) | Oct 2020

- Developed a tkinter application which simulates a real life **Bank Management System**.
- Languages and Libraries: Python, MySQL, yagmail, PIL, tkinter.

## 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, awaiting publication.

[J.1] 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

## ACHIEVEMENTS

- YUKTI** (MoE) Innovation Challenge **2023 Finalist**. Ranked among the **Top 100** startup ideas in India.
- Global rank 389** in the Codechef Starters 153, 2024
- Qualified PRMO 2019** - Maths Olympiad Organized by HBCSE and MTA
- Winner** of multiple coding contests and exhibitions of Tech-fests - **800+** participants.

## SKILLS

**Languages:** C/C++, Python, Java, JavaScript, HTML, CSS

**Tools & Frameworks:** Git/Github, NodeJS, ExpressJS, NestJS, Fastify, REST, Flask, Agile

**Databases:** MongoDB, PostgreSQL, Redis, MySQL

**Cloud Services:** Render, Firebase, Cloudinary, Twilio, Mailgun, GCP

**Operating Systems:** Microsoft Windows, Linux - Ubuntu, Bookworm (Debian)

**Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Database Management System, Computer Organization & Architecture, Artificial Intelligence & Machine Learning, MATLAB

**Soft Skills:** Problem Solving, Self-learning, Presentation, Adaptability, Communication

## EXTRACURRICULAR

- Attended a month long hands-on workshop on **Cloud Computing** and **Generative AI** by **Google**.
- Participated in various competitive coding competitions conducted by **IIT Kharagpur** and **TCS**.
- Gained early proficiency in mental arithmetic through **abacus** training.
- Enthusiastic about sports and won various accolades in Table Tennis (District-level), Basketball and Swimming.