

YUG AGARWAL

Backend Developer | AI, Computer Vision & Automation Enthusiast

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Professional Summary

Fourth-year Computer Science (AI) student with experience across **3+ roles** in backend development, automation, and system design, contributing to **10+ real-world tools and systems**. Built **8+ AI, automation, and backend projects** using Python, Java, SQL, Django, OpenCV, and MySQL, with certifications in Python, Data Analytics, and AI.

Work Experience

- **Backend Developer Intern at Tranquiex, Ghaziabad** (May 2025 – Sep 2025)
 - Implemented 2 core backend modules and supported 20+ test cycles, and proposed 15+ future feature enhancements.
 - Collaborated with a team of 6, explored 3+ new technologies, and supported project planning and team coordination.
- **Research Analyst Intern at Nebulyn, Ghaziabad** (Oct 2024 – Apr 2025)
 - Conducted 15+ detailed market and competitor analyses to uncover trends and support strategic planning.
 - Delivered 10+ insight-driven reports from multi-source data, aiding key business decisions.
- **Operations Intern at Medipol Pharmaceuticals Pvt. Ltd., Noida** (Aug 2023 – Sep 2023)
 - Completed a 5-week internship, assisting in 2+ major tender filings, order tracking, and process documentation.
 - Strengthened CoreIDRAW skills by completing 8+ design tasks under expert guidance.
- **Business Operations Support in Family Business** (Apr 2023 – Aug 2023)
 - Created 50+ pricing spreadsheets with delivery, commissions, and distance-based calculations for e-commerce shift.
 - Handled 150+ product inventory and SKUs entries and optimized daily business data using advanced Excel features.

Education

- **ABES Institute of Technology, Ghaziabad – 201009 (Pursuing)**
Bachelors of Technology, Computer Science & Engineering, Specialization in Artificial Intelligence & Honors in Cyber Security
Abdul Kalam Technical University (AKTU – formerly UPTU) | CGPA: **7.38/10**
- **Bhai Parmanand Vidya Mandir School, Delhi – 110092**
Intermediate: PCM with Computer Science in CBSE Board | Cleared with **76.2%** in 2023

Technical Skills

- **Programming Languages:** Python, Java, C
- **Frameworks & Libraries:** Django, OpenCV, MediaPipe, NumPy, Pandas, Tkinter, Matplotlib, PyAutoGUI
- **Databases:** MySQL, SQLite, MongoDB
- **Web Development & Deployment:** HTML, CSS, JavaScript, website hosting, DNS & domain configuration, SEO optimization
- **Core Concepts:** Data Structures & Algorithms, OOP, System Design Basics
- **Automation & Scripting:** PowerShell, Command Prompt (CMD), Google Apps Script, workflow automation
- **Tools & Technologies:** Git, VS Code, Netlify, Vercel, Google Analytics, Office 365 (Excel, Word, PowerPoint)
- **AI-Assisted Development:** ChatGPT, Claude Code, AntiGravity, DeepSeek (prototyping, debugging, automation workflows)

Projects

- [RoomIQ - Intelligent Room-Based Energy Control \(Python, OpenCV, Raspberry Pi, Arduino, Firebase\)](#)
Engineered an **AI classroom** energy control **automation** system that detects occupancy in **real time**, intelligently controls lights and fans, reduces unnecessary energy usage, and ensures smooth, autonomous operation.
- [HubCenter - Serverless Notification Hub \(JavaScript, Netlify, Google workspace & automation tools\)](#)
Built a **serverless CMS** using Google Sheets and Docs, with real-time caching, secure parsing, dynamic SEO, RSS feed, and **automated newsletter workflows**, enabling content management in static websites via **Google Apps Script**.
- [HandScope - AI-Based System Control via Hand Gestures \(Python, MediaPipe, OpenCV, PyAutoGUI\)](#)
Developed a hand gesture-controlled automation tool to perform **7+ system tasks** (e.g., volume control, mute/unmute, app launch, etc.) using real-time computer vision with over **90% accuracy**.
- [InvenGo - Telegram Bot for Billing & Stock Management \(Python, MySQL, Telegram API\)](#)
Created a Telegram bot **handling 100+ billing** and inventory queries, integrating MySQL & Excel to streamline backend operations. Enhanced small business workflow **efficiency by 50%** through automated menu-driven chatbot interactions.
- [Additional Automation, Utility and Management Projects](#)
Built a range of automation, utility and management tools including a **Late Comers Management System (Desktop & Web)**, **Windows Login UI Replica**, **Cipher tools**, **system automation scripts**, and **database operation tools**, along with data processing tasks using **Pandas** and **NumPy**, showcasing rapid prototyping skills.

Top Certifications

- Data Analytics with Python – NPTEL
- Data Science for Engineers – NPTEL
- The Joy of Computing using Python – NPTEL
- Python Essentials 1 – CISCO Networking Academy
- Database Management System 1 – Infosys Springboard
- Elements of AI – University of Helsinki (Minna Learn)

Achievements

- **Presenter – South Asian Conference on Science and Technology (SACST) 2026** **(Mar 2026)**
*Presented a research paper on **RoomIQ**, an **AI-powered classroom energy automation system** using **edge-cloud architecture** for real-time occupancy detection and **intelligent device control**.*
- **Finalist – Code-A-thon 4.0 (3rd Year Mini Project Competition)** **(Nov 2025)**
*Advanced to the **Final Round** from **200+ teams** with **RoomIQ**, an **AI-powered classroom energy automation system**.*
- **Internal Winner – Smart India Hackathon (SIH) 2025** **(Sep 2025)**
*Declared **internal round winner** among **200+ teams**, shortlisted in the **Top 50 teams** for **PS ID: SIH25002**, and selected to represent the institute for national-level SIH.*
- **Finalist – Ideathon 3.0 (2nd Year Mini Project Competition)** **(Jan 2025)**
*Earned **finalist recognition** for **HandScope**, an **AI-based gesture-controlled automation system** powered by computer vision.*

Leadership & Additional Information

- **Leadership Experience**
 - **Student Coordinator, Institution's Innovation Council (IIC)** – Organized **25+ innovation initiatives** while collaborating with **35+ student members** to promote entrepreneurship and innovation.
 - **Registration Team Lead, Annual College Fest** – Led and managed a team of **12 members** to handle registrations for a fest with **3500+ footfall**, ensuring smooth operations and timely coordination.
 - **Organizing Team Member, Hacknovate 7.0 (International Hackathon)** – Contributed to event planning and execution, coordinating volunteers and operations, while supporting sponsor outreach and onboarding.
- **Open to:** Full-time Software Engineer, Backend Developer, AI/Computer Vision Engineer roles
- **Coding Profiles:** 120+ DSA problems solved ([LeetCode](#))
- **GitHub:** 8+ production-ready projects ([GitHub](#))
- **Languages Known:** Hindi (Native), English (Professional)
- **Typing Speed:** 55+ WPM with 98%+ Accuracy
- **Strengths:** backend development, automation, computer vision, data handling, team coordination, documentation, Communication, and cross functional collaboration.