

YUG AGARWAL

Backend Developer | AI, Computer Vision & Automation Enthusiast

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🔗 Portfolio Website: <https://helloyug.github.io/>

Professional Summary

Proactive **third-year Computer Science (AI)** student with experience in **backend development, research analysis, and business operations**. Skilled in **Python, C, Java, SQL, and DSA**, with hands-on contributions to **10+ automation and AI-driven tools and systems**. Built scalable tools using **OpenCV, MySQL, Tkinter, and Telegram API**, focusing on problem-solving and system design. Certified in **Digital Marketing, Python, Data Analytics, and Soft Skills** via platforms like **Google, CISCO, and NPTEL**. Known for strong work ethic, fast learning, and effective collaboration in technical and team environments.

Work Experience

- **Backend Developer at Tranquix, Ghaziabad** (May 2025 – Sep 2025)
 - Developed 4+ core backend modules, led 20+ testing iterations, 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 CorelDRAW 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: **7.51/10**
- **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, C and Java
- **Database Management:** MySQL, SQL, SQLite
- **DSA:** Good foundation in Data Structures and Algorithms
- **Design Tools:** Canva, Adobe Express, CorelDraw (Basic)
- **Version Control:** Git
- **Productivity:** Office 365 (Excel, Word, PowerPoint)
- **Frameworks & Libraries:** OpenCV, MediaPipe, PyautoGUI, Numpy, Pandas, Tkinter, Matplotlib, Django

Projects

- **[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**.
- **[RoomIQ – Intelligent Room-Based Energy Control \(Python, OpenCV, Raspberry Pi, Arduino, Firebase\)](#)**
Designed an AI-enabled classroom **automation** system that detects occupancy in **real time**, intelligently controls lights and fans, reduces unnecessary energy usage, and ensures smooth, autonomous operation.
- **[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.
- **[Canteen Management System \(Python, MySQL\)](#)**
Designed a robust system to **manage 200+ orders**, automate inventory updates, and generate real-time bills. Demonstrated GUI and backend development skills using Tkinter and MySQL.
- **[MySQL Backup & Recovery Utility \(Python, MySQL\)](#)**
Developed a **1-click utility** for text-based MySQL backups with database/table selection; achieved **98%+ recovery** success in test runs, simplifying disaster recovery.

- [Various Small Computation, Automation, and Management Projects](#)

Built multiple utility tools including a **Late Comers Management System (Desktop & Web)**, **Windows Login UI Replica**, **Cipher Tools for message Encryption-Decryption**, **Sound Swap Tool**, and an **SQL Deletion Prank Tool**. Also explored data manipulation using **Pandas** and **NumPy**, showcasing versatility in building efficient, creative, and purpose-driven mini projects.

Certifications

- The Fundamentals of Digital Marketing – Google
- Biometrics online course offered by NPTEL – TCS iON
- Master Data Management for Beginners – TCS iON
- Elements of AI – Minna Learn
- The Joy of Computing using Python – NPTEL
- Database Management System 1 – Infosys Springboard
- Developing Soft Skills & Personality – NPTEL
- Python Essentials 1 – CISCO Networking
- Data Science for Engineers – NPTEL
- Data Analytics with Python – NPTEL

Achievements

- **Finalist – Code-A-thon 4.0 (3rd Year Mini Project Competition)** **(Nov 2025)**
*Reached the **Final Round** among **200+ teams** with **Project RoomIQ**, an AI-enabled smart 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)**
*Reached the **Final Round** among **200+ teams** with **Project HandScope**, an AI-based gesture-controlled automation system.*

Other Details

- **Position of Responsibility**
 - Elected **Student Coordinator, Institution's Innovation Council (IIC)** – Contributed to organizing **50+ innovation-driven activities** and fostering collaboration within a team of **30+ student members**.
 - **Registration Team Lead, Annual College Fest** – Led and managed a team of **12 members** to handle registrations for a fest with **3500+ footfall**, ensuring seamless operations and timely coordination.
- **Typing Speed:** 55 WPM+ with 98%+ Accuracy
- **Languages Known:** Hindi (Native Proficiency), English (Professional Working Proficiency)
- **Soft Skills:** Attention to detail, Communication, Problem Solving, Critical Thinking, Adaptability, Fast Learning, Teamwork & Leadership.