

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 Tranquiex, 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

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- 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

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- **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

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- **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.