

# Yash Singhal

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## EDUCATION

- Gobind Ballabh Pant Institute Of Engineering & Technology** Pauri Garhwal, Uttarakhand  
*Bachelor of Technology - Electronics & Communication engineering; GPA: 7.55* November 2021 - June 2025  
*Courses: Data Structures & Algorithms, object-oriented programming, C++, Python Programming.*
- Kendriya Vidyalaya No.1** Roorkee, Uttarakhand  
*Intermediate - PCM with Computer Science; Percentage: 81.5%* March 2019 - March 2020  
*Courses: Physics, Chemistry, Mathematics, Python Programming, File Handling, MySQL, object-oriented programming*

## SKILLS SUMMARY

- Programming Languages::** Python, C++, TypeScript, HTML5, CSS3
- Frameworks & Libraries::** Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
- Tools & Platforms::** Git, GitHub, Jupyter Notebook, Google Colab, VS Code, Linux, Windows, Arduino, Raspberry Pi
- Soft Skills::** Analytical Thinking, problem-solving skills, Teamwork, communication skills, Quick Learning, motivated
- Methodologies & Processes::** Agile, Scrum, Software Development Lifecycle, Data Cleaning, Data Visualization, Machine Learning, Version Control Systems

## EXPERIENCE

- Indian Institute of Technology , Roorkee** Roorkee  
*Junior Research Fellow- ADAS (Advanced Driver Assistance System)* Aug 2025 - Sep 2025
  - Machine Learning Module Development:** Assisted ADAS ML development on Jetson Nano to boost performance.
  - Methodology & Implementation:** Optimized ADAS ML models via data prep, labeling, and calibration.
  - Impact & Outcome:** Boosted ADAS accuracy using precise data handling and Machine Learning methods.
- Central Building research Institute, Roorkee** Roorkee  
*Intern (Wall Climbing Drone) )* July 2024 - Sep 2024
  - Control Software Development:** Developed modular C++ software for autonomous system control.
  - Adaptive Algorithm Implementation:** Applied optimized, real-time adaptive algorithms for performance.
  - Collaborative Impact:** Enabled seamless collaboration with CSIR-CBRI scientists and engineers.

## PROJECTS

- Car Price Prediction (Machine Learning, Regression Models, Feature Engineering, Data Analysis):** Built ML models (Logistic Regression, Random Forest) with feature engineering and tuning on car-sales data; achieved 86% accuracy and used GitHub for version control.
- Student Record Management System (Python, OOP, File Handling):** Developed a Python-based console system to add, update, delete, search, and display student records using OOP and file handling. Ensured persistent storage and published the project on GitHub with modular, maintainable code.
- House Price Prediction (Machine Learning, Regression Models, Python, Pandas, Data Analysis):** Built a regression model after structured data preprocessing, achieving 90%+ accuracy and visualizing insights using Matplotlib and Seaborn. Managed workflows with GitHub and implemented reusable data pipelines.
- Student Accommodation Website (Web Development, Frontend):** Developed a responsive accommodation browsing website with city, gender and location filters using HTML, CSS, and JS. Improved UI/UX with interactive features and deployed on GitHub Pages for live testing.
- Automation Door Lock System (C++, Web Development, Embedded Systems):** Designed an IoT-based smart door lock using a microcontroller and web server, enabling mobile-controlled access. Built embedded logic in C++ and frontend in HTML/CSS/JS. Ranked Top 10 among 180+ teams at a national hackathon and published the code on GitHub.

## CERTIFICATIONS & TRAININGS

- Python Programming – GreatLearning:** Python, OOP, NumPy, Pandas (Jul 2024)
- Frontend Development - Internshala:** HTML, CSS, JS, Responsive Design (Dec 2023)
- Frontend Development (Wix Studio) - Fostride:** Wix, UI/UX, HTML, CSS (May 2024)
- Data Analytics Training - Deloitte (In Progress):** Data analysis, visualization, reporting
- Machine Learning Certificate - Cognify (In Progress):** ML, Supervised & Unsupervised Learning

## ACHIEVEMENTS AND AWARDS

- Best Performer - Jigyasa Program by CSIR-CBRI and KVS - 2019–20
- Adhoc Fellowship - IIT Roorkee, Aug 2025: Video Analytics & ANPR (Automatic Number Plate Recognition)
- Class 9 Academic Award - Outstanding Performance
- Class 10 Academic Award - Top Marks in Mathematics in School
- Participated in National Hackathon organized by COER University, ranked Top 10 among 180+ teams