

Pratham Handa

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EDUCATION

Thapar Institute of Engineering & Technology
B.Tech. in Computer Science & Engineering (CGPA - 9.75)

Patiala, IN
Aug. 2023 – June 2027

D.A.V. Public School, Ludhiana
Senior Secondary Examination CBSE (Percentage - 96.0%)

Ludhiana, IN
Apr. 2022 – Mar 2023

WORK EXPERIENCE

Full Stack Developer Intern
DBuck

Apr. 2025 – Present
Patiala, IN

- Developed a full-stack web app for a **student housing startup** using React, Express.js, and MongoDB.
- Built features like interactive listings, location search, and a landlord **portal for 10k+ students**.

PROJECTS

Brain Tumor Detector | *Python, PyTorch, YOLO, SAM, Streamlit* (GitHub | Live) Jul. 2025

- Architected a 3-stage deep learning pipeline for precise tumor segmentation, achieving **99.3% classification accuracy** and a 97.2% IoU score.
- Researched and implemented a real-time diagnostic tool providing quantitative tumor analysis to aid surgical planning via high-precision, **pixel-level tumor masking**.

AI-RoadIntelligence | *Python, YOLOv8, OpenCV, SUMO, SightEngine API* (GitHub) Jun. 2025

- Engineered a real-time **traffic congestion reduction** system using YOLOv8, processing video inputs & concurrent **YouTube live streams** at 45 FPS with less than 50ms processing latency.
- Integrated Machine Learning models with a SUMO traffic simulator to enable dynamic emergency routing and an **automated alert system** with less than 3 second notification time.

RoomsonRent | *React, Node.js, MongoDB, Docker, RESTful APIs* (GitHub | Live) Apr. 2025

- Deployed a containerized student housing platform with **dual dedicated portals**, using React, Node.js, and RESTful APIs to simplify the rental lifecycle for students and landlords.
- Curated a real-time property search platform with Cloudinary integration **secured by JWT authentication**, handling 1000+ listings with 60% faster load times and a 75% reduction in response time.

TECHNICAL SKILLS

Languages:	C, C++, Python, JavaScript, HTML, CSS, MATLAB, R
Developer Tools:	Git, GitHub, VS Code, Docker, POSTMAN, SUMO, Node.js
Frameworks/Libraries:	React.js, Express.js, Pandas, NumPy, Matplotlib, PyTorch, TensorFlow, OpenCV, scikit-learn
Cloud/Databases:	SQL Server, Firebase, MongoDB
Soft Skills:	Problem Solving, Analytical Thinking, Team Collaboration, Communication
Coursework:	Data Structures and Algorithms, Operating Systems, Database Management System, Object Oriented Programming, Artificial Intelligence

POSITIONS OF RESPONSIBILITY

Joint Secretary - LEAD Society Sep. 2023 – Present
Thapar Institute Of Engineering & Technology Patiala, IN

- Built the **LEAD's official website** (leadtiet.netlify.app) with a smooth, user-friendly interface.
- Mentored over 50 students by taking a 2-hour-long workshop on **Data Structures and Algorithms (DSA)**.

Technical Head - Technical Seminar On Role Of Steel Mar. 2024 – Apr. 2024
Civil Department, Thapar University Patiala, IN

- Led technical operations for INSDAG steel seminar, managing logistics, designing, and hospitality.
- Deployed interactive landing page with 102.7% CTR and 500+ users; **hosted presentations** for six speakers.

ACHIEVEMENTS

- 600+ DSA Questions** solved on [Leetcode](https://leetcode.com) and [GeeksforGeeks](https://www.geeksforgeeks.com), demonstrating proficiency in C++.
- Student Placement Representative** for the branch of Computer Science & Engineering at TIET.
- Reliance Undergraduate Scholar** by securing Top 5000 Rank PAN India.
- Merit III Scholarship** received for exceptional academic performance in college amounting to 1.7 Lakhs.
- Knight Badge on LeetCode** for ranking in the top 3.5% globally with a 1939 contest rating.