

SARABDEEP SINGH BILKHU

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LinkedIn: www.linkedin.com/sarabdeep-singh-bilkhu | Portfolio: sarabdeepsbilku.github.io

Career Objective

I am a detail-oriented and innovation-driven Computer Science Engineering student with a strong foundation in backend development, machine learning, and robotics. Experienced in building full-stack applications and embedded systems using Python and modern web technologies. Passionate about solving real-world problems through scalable software solutions and AI automation. Seeking internship/full-time roles in backend engineering, AI/ML development, or embedded systems.

Projects

Gesture-Based Robotics with OpenCV & MediaPipe

Nov, 2024 – Apr, 2025

Developer

- Developed gesture recognition algorithms using OpenCV.
- Integrated MediaPipe for real-time processing of user inputs.
- Enhanced user engagement through interactive robotics solutions.

AlgoTrace

Jan, 2026

Web Developer – Link: sarabdeepsbilku.github.io/AlgoTrace

- Built a proxy-based execution engine to record and replay operations.
- Created animated visualizations for arrays, trees, and graphs.
- Integrated Monaco Editor for running JavaScript with multi-language references.

Educational Qualifications

April, 2024
Rajgomal, Jalandhar

Higher Secondary Certificate
S.T.S. World School

Expected in June, 2028
Gharuan, Mohali → Phagwara, Punjab

Bachelor of Engineering – Computer Science
Completed Year 1 at Chandigarh University;
Continuing from Year 2 at Lovely Professional University (LPU)

Technical Skills

- Programming & Development:**
C, C++, Python | React, Node.js, SQL
- Databases & Backend:**
MySQL | Firebase | Supabase
- AI & Data:**
Machine Learning | Computer Vision | NumPy, Pandas
- Software Engineering:**
Data Structures | Object-Oriented Programming
- Tools & DevOps:**
Git | AWS

Publications

R. Gupta, S. S. Bilkhu, R. Khurana and A. Kumar, "Enhancing Automated Interactions via Hybrid Gesture Recognition," 2025 International Conference on Intelligent and Secure Engineering Solutions (CISES), Greater Noida, India, pp. 1060–1065, 2025.

DOI: [10.1109/CISES669](https://doi.org/10.1109/CISES669)

Additional Information

- Languages: English (Fluent), Hindi (Fluent), Punjabi (Fluent), Japanese (Beginner).
- Achieved 4 kyu rank on Codewars for coding challenges.
- Secured Top 10 recognition at a Project Exhibition for innovation and technical skill.
- NCC alumni with demonstrated leadership, discipline, and teamwork.
- Showcased a Gesture Recognition project at CU CAB Meet 2025.