PRABHKIRAT KAUR

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SUMMARY

Final-year Computer Science Engineering student with hands-on experience building reliable software across backend, full-stack, and AI-driven projects. Skilled in designing, developing, testing, and deploying real-world systems using Node.js, React, Python, PostgreSQL, and Docker. Enjoys collaboration, writing clean code, and learning quickly through feedback. Motivated to build technology that helps people do more.

EDUCATION

Indian Institute of Technology Jammu <div align="right">**2022-2026**</div>

Bachelor of Technology in Computer Science and Engineering <div align="right">*CGPA - 7.84/10*</div>

- Won Silver medal in Algobash Hackathon at Inter IIT Jammu Technical Fest. ↗
- Secured 1st position in Cogniquest (Aptitude Test), IIT Jammu.

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, TypeScript, Prolog

Backend: Node.js, REST APIs, PostgreSQL, MongoDB, Redis

Frontend: React, HTML, CSS

AI/ML: PyTorch, TensorFlow, Hugging Face, Pandas, NumPy

Core CS: Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Databases

DevOps: Docker, Git/GitHub, Linux

Tools: Postman, PowerShell, Bash

Competitive Programming: **Specialist** at Codeforces, **Knight** at LeetCode

WORK EXPERIENCE

AlgoUniversity <div align="right">**Aug-Sep 2025**</div>

Problem Setting and Mentor

- Created and tested algorithmic problems for 5,000+ learners, focusing on correctness and edge cases.
- Reviewed and evaluated solution outputs, providing structured feedback and clear reasoning.
- Mentored candidates on writing clean C++ code and better problem-solving.

AIS <div align="right">**April-July 2025**</div>

Software Engineer Intern

- Built a full-stack CRM system and took it from design to deployment using Docker.
- Developed backend REST APIs in Node.js (Hono) with JWT authentication and PostgreSQL.
- Used a YAML-based config system to control UI, API logic, and SQL queries for faster feature updates.

PROJECTS

AI-Based Speech-to-Text for Low-Resource Languages

- Built an end-to-end speech-to-text system for Punjabi and Dogri using PyTorch and Hugging Face.
- Curated and processed 137+ hours of audio data and used zero/few-shot fine-tuning.
- Tested models using standard evaluation metrics and improved accuracy.
- Focused on reliability and maintainability of the ML pipeline. | ⬡

Waste Segregation Classifier

- Built a CNN using TensorFlow/Keras for waste classification.
- Optimized the model using quantization and deployed it on Raspberry Pi.
- Tested the model in a local environment before deployment. | ⬡

Multi-Threaded SMTP Email Server

- Built a concurrent SMTP server using socket programming and multi-threading.
- Designed a custom SQLite database schema for email storage and retrieval.
- Focused on performance, concurrency, and clean backend design. | ⬡

POSITION OF RESPONSIBILITY

- Head of the Event Management Department Coding Club. ↗
- Head of Sponsorship at Kritash.
- Head of Events at Malang.
- Co-Head of content management Chitraka.