

CHERIKA KAUSHAL

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EDUCATION

Punjabi University, Patiala

2023 – 2027

Bachelor of Technology (B.Tech.) in Computer Science & Engineering

CGPA: 7.89/10

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Database Management Systems, Computer Networks, Artificial Intelligence, Machine Learning, Software Engineering, Theory of Computation

RESEARCH EXPERIENCE

Indian Institute of Technology Ropar

May 2026 – Jul 2026

Summer Research Intern · Supervisor: Dr. Sujata Pal

- Developed two independent full-stack research software systems for healthcare studies, including participant-facing applications and researcher dashboards.
- Designed REST APIs, JWT authentication and MongoDB database architecture, and built secure backend services using Node.js and Express.js.
- Contributed to wearable-device integration, testing and software validation within a faculty-led research environment.

PROJECTS

Women's Health Research Platform

React | TypeScript | Node.js | Express.js | MongoDB | JWT

- Built participant registration, symptom tracking and menstrual health logging, with questionnaire management for a longitudinal research study.
- Implemented authentication, REST APIs and MongoDB data models, along with research dashboards and dataset export for study coordinators.

Stress Management Research Platform

React | TypeScript | Node.js | Express.js | MongoDB | JWT

- Built stress-assessment and session-management workflows, including wearable integration for physiological data collection.
- Designed the database schema, REST APIs and authentication layer, and built research dashboards for reviewing study data.

When Systems Break

Python | Pandas | NumPy | Matplotlib

- Built a simulation framework to study system resilience through controlled failure experiments involving missing data and noise.

Signal vs Noise

Python | Pandas | NumPy | Matplotlib

- Simulated the effect of missing values and noise on system outputs to evaluate robustness and visualise data-quality trade-offs.

ARPIIS — AI-assisted Research Paper Explorer

React

- Built a modular frontend for AI-assisted research paper exploration and organisation, designed to support future expansion into broader research workflows.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL, C, C++

Frameworks: React, Next.js, Node.js, Express.js, Vite, Tailwind CSS

Databases: MongoDB, Mongoose

Backend: REST APIs, JWT Authentication, Role-Based Access Control

Libraries: NumPy, Pandas, Matplotlib

Tools: Git, GitHub, Linux, VS Code, Postman

EXPERIENCE

BuildVR

Jan 2025 – Present

Software Development Intern

- Developing software for immersive VR experiences and interactive 3D applications, and integrating 3D assets into VR-ready builds.
- Assisting with AI-assisted video generation workflows, software testing, deployment and feature implementation.

Grubox

Jan 2025 – Present

Marketing Intern

- Supported digital marketing, content planning and social media campaigns for brand outreach and community engagement.

LEADERSHIP & ACTIVITIES

- Executive Member – Technical Society, Punjabi University (Mar 2025 – Mar 2026)
- Member – Placement Club, Punjabi University (Aug 2025 – Dec 2025)
- Contributor – GirlScript Summer of Code 2025 | Contributed to open-source repositories within distributed development teams.

ACHIEVEMENTS

- Winner – GDG TechSprint Hackathon
- Participant – Smart India Hackathon 2025, Flipkart GRIID, GenAI Exchange Hackathon 2025
- AI/ML for Geodata Analysis – Indian Institute of Remote Sensing (ISRO)