

PALLAVI

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SUMMARY

Full Stack Developer and M.Tech Computer Science student with hands-on experience building and deploying production-grade web applications using React.js, Node.js, Express.js, and PostgreSQL. Developed 2 end-to-end platforms featuring real-time Socket.IO architecture, JWT-secured REST APIs, and role-based access control.

EDUCATION

M. Tech Computer Science and Engineering / Shoolini University / Solan, HP
9.08 CGPA

2024 – 2026

B. Tech Computer Science and Engineering / Shoolini University / Solan, HP
8.89 CGPA

2019 – 2023

SKILLS

- **Frontend:** HTML5, CSS3, Tailwind CSS, React.js, Next.js
- **Backend:** Node.js, Express.js, JWT Authentication, REST APIs
- **Programming Languages:** C, C++, Java, Python, JavaScript, TypeScript
- **Databases:** MySQL, PostgreSQL
- **Tools & Platforms:** Git, GitHub, Figma, VS Code, CI/CD, Postman, Vercel, Render, Socket.IO
- **Concepts / Technologies:** Data Structures & Algorithms, Object-Oriented Programming (OOP), DBMS, Operating Systems Software Development Lifecycle (SDLC), Agile

PROJECT EXPERIENCE

Smart Grievance Redressal System [GitHub](#)

March 2026

- Developed a full-stack civic complaint management platform enabling citizens to submit and track grievances across 4 departments (Water, Electricity, Roads, Garbage) with role-based dashboards for Citizens, Authorities, and Admins, and automated department routing workflows using role-based access control.
- Developed separate role-specific dashboards for each user type — citizens track complaint status in real time, authorities manage and resolve assigned complaints, and admins oversee the entire platform with full visibility.
- Designed 10+ JWT-secured REST API endpoints with Axios-powered frontend integration, API rate limiting, input validation, implementing secure authentication, complaint lifecycle management (submitted → in progress → resolved), and department-based complaint assignment.
- Tech Stack: React.js, Vite, Tailwind CSS, Node.js, Express.js, PostgreSQL, JavaScript, JWT Authentication, REST APIs, Axios.

AirTurn — Aviation Ground Turnaround Coordination Platform [Live](#)

April 2025

- Developed and deployed a full-stack real-time aviation turnaround platform with a modular system design managing ground operations across 6 crew roles (Ramp, Fueling, Cleaning, Catering, Ground, Engineering) with task states (Pending, In Progress, Blocked, Completed), priority levels, and SLA target tracking per task.
- Engineered a task dependency system that automatically blocks task progression if upstream tasks are incomplete, and implemented real-time event broadcasting via Socket.IO, pushing task updates, dependency changes, and incident alerts instantly to all connected clients without page refresh.
- Built an incident reporting module with severity and category classification and resolver tracking, backed by 15+ JWT-secured REST API endpoints across 6 modules with role-based access control middleware, centralized error handling, environment-based configuration via dotenv, and real-time Socket.IO events validated via a custom browser-based test client.
- Tech Stack: React.js, Vite, Tailwind CSS, Node.js, Express.js, PostgreSQL, Socket.IO, JavaScript, JWT Authentication, REST APIs, Postman-deployed on Vercel (frontend) + Render (backend).

Gender & Age Detection Model Using CNN [GitHub](#)

May 2022

- Built a gender and age detection system using Convolutional Neural Networks trained on the UTKFace dataset, achieving 90% accuracy.
- Built an inference pipeline using OpenCV for face detection and prediction overlay on static and streamed image inputs.
- Applied data augmentation and dropout regularisation to improve model generalisation across varied lighting, age groups, and facial features.
- Tech Stack: Python, NumPy, TensorFlow, OpenCV, Keras.

CERTIFICATIONS

- The Python Mega Course-Build 10 Real World Applications, [Udemy, 2020](#)
- Python Data Structures, [Coursera, 2022](#)
- Responsive Web Design, [Coursera, 2021](#)
- HTML, CSS, and JavaScript for Web Developers, [Coursera, 2022](#)

LEADERSHIP, ACHIEVEMENTS AND EXTRACURRICULARS

- Led a 4-member team on a major undergraduate project, coordinated task distribution, conducted weekly stand-ups, and delivered a working prototype within a 6-week sprint cycle.
- Published and presented research paper "Towards Robust Violence Detection in Surveillance Videos: Challenges and Solutions" at the 13th International Conference on Computing for Sustainable Global Development (INDIACom 2026), IEEE. Sole first author.

LANGUAGE PROFICIENCY

- **Fluent:** English and Hindi