

MAHIMA SINGH

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EDUCATION

B.Tech – Computer Science Engineering
Jaypee University of Information Technology, Himachal Pradesh
2023 – Present | CGPA: 8.78

SKILLS

Languages: C++, Python, C, JavaScript
Web Development: HTML, CSS, Flask, PHP, Bootstrap
Frameworks & Tools: SimPy, Tkinter, MySQL, Chart.js, Matplotlib, TensorFlow, Keras, OpenCV, NumPy, Flask
CS Concepts: DSA, OS, DBMS, OOP
Soft Skills: Problem Solving, Time Management, Team Collaboration

PROJECTS

- **Hostel Smart Water Management System** – Built a web-based dashboard to monitor and simulate hostel water usage in real-time. Included features like leakage detection, greywater reuse, peak-hour usage alerts, and analytics with Chart.js for event logging and visualization.
- **CPU Scheduling Simulator** – Designed an interactive web simulator for FCFS, SJF, Round Robin, and Priority scheduling algorithms. Included dynamic process input, Gantt chart visualization, and computed turnaround, waiting, response, and completion times.
- **Medical Leave Management System** – Created a leave management portal with role-based logins for students, doctors, teachers, HODs, and deans. Supported document uploads, real-time leave tracking, and sequential approval workflow with status updates.
- **Down Syndrome Detection from Facial Images Using Deep Learning** – Developed a deep learning-based image classification system to detect Down Syndrome from facial images using CNN, VGG16, and ResNet50 architectures. Implemented image preprocessing, normalization, and data augmentation techniques on a dataset of 2,999 facial images. Applied transfer learning using VGG16 and ResNet50 models and evaluated performance using accuracy, precision, recall, F1-score, and confusion matrix. Achieved best performance using VGG16 with 85.19% accuracy. Technologies used: Python, TensorFlow, Keras, OpenCV, NumPy, Matplotlib, Google Colab.

CERTIFICATIONS

- Functional Data Structures and Algorithms – Infosys Springboard
- Introduction to Python – Infosys Springboard
- Programming Using C++ – Infosys Springboard

ACHIEVEMENT

- **Winner – Innovate with Nvidia: From Zero to Hero (Ideathon)** – Developed an integrated IoT solution to tackle food insecurity:
 - Aahar App: Donors post surplus food.
 - Aahar Suraksha Kendra: IoT-enabled community fridges.
 - GPS-Enabled Eco-Friendly Vehicle: Managed food pickups.

VOLUNTEER EXPERIENCE

- **SIAM JUIT – Member** – Organized and participated in events like Auctionomics, Innovate with Nvidia, and Lunix.