

# HARKIRAT SINGH

(<https://harkirat.site>)

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## PERSONAL DETAILS

**Gender:** Male

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**GitHub:** <https://github.com/h-s14>

## EDUCATION

**Thapar Institute of Engineering and Technology**  
Bachelor of Computer Science and Engineering (*Pursuing*)

**Expected Year of Graduation – 2025**  
(Patiala, Punjab)

**S.C.C.L.H. Jain Public School**  
Class - XII

**Year of Passing - 2021**  
(Khanna, Punjab)

**Om Prakash Bansal Modern School**  
Class - X

**Year of Passing – 2019**  
(Gobindgarh, Punjab)

## PROJECTS

**xAI Medical Diagnosis | React, Python, Pandas, Keras, Flask, AWS** ([GitHub Link](#))(<https://xai.harkirat.site>)

- **Dataset:** Utilized datasets for diagnosing Diabetes and Breast Cancer, including MRI images and clinical data.
- **Frontend Integration:** Connected a React frontend with a Python Flask API backend for seamless interaction and data flow.
- **Explainability:** Applied xAI techniques like SHAP and LIME to interpret predictions and enhance model transparency.

**Thermal Infrared Object Detection for Aerial Crafts | Python, Flask, OpenCV, YOLOv8** ([GitHub Link](#))

- **Data Handling:** Managed file uploads and HTML rendering using Flask
- **Data Visualization:** Integrated Flask routes for displaying processed images and video streams with detection results.
- **Model Inference:** Integrated Flask routes for displaying processed images and video streams with detection results.

**Block Chain Crypto Transfer Application | HTML, CSS, JS, React, Solidity** ([GitHub](#))(<https://coin.harkirat.site>)

- **Developed Responsive Front – End:** Designed and Implemented a responsive and user-friendly interface for transferring crypto currency which seamlessly integrates with Meta-Mask wallet.
- **Implemented Smart Contract:** Created robust functionality to transfer Ethereum using blockchain securely using smart – contract.
- **Test Network Deployment:** Deployed the working Application with Smart Contract on Sepolia ETH test network.

**Hospital Management System | MongoDB, ExpressJS, React, NodeJS**

([GitHub](#)) | (<https://healthflow.harkirat.site>) | (<https://dash-healthflow.harkirat.site>)

- **Security and Data Management:** Implemented user authentication and role-based access to ensure data security and privacy.
- **User Interface and Experience:** Created a responsive and Dynamic user interface with React, enhancing the overall user experience and operation efficiency.
- **Admin Management Dashboard:** Designed and implemented a centralized dashboard for administrators, enabling efficient management of applications and doctor profiles.
- **API and Integration:** Ensured seamless communication between the front-end and back-end through well designed APIs, making requests over **HTTPS** to the backend supporting a cohesive and efficient architecture.

- **All the web projects are deployed on private AWS server using CI/CD pipelines with GitHub actions workflows.**

## TECHNICAL SKILLS

**Languages:** C, C++, Java, HTML, CSS, JavaScript, SQL, Python

**Developer Tools:** VS Code, Android Studio, Google-Colaboratory, GitHub Actions Workflow, Docker

**Technology and Frameworks:** GitHub, AWS, Flask, React, ExpressJS, NodeJS, RESTful APIs