

# Ayush Roy

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## TECHNICAL SKILLS

- Programming: Python, Java (basic), C (basic), TypeScript (basic)
- Web Development: React, HTML, TailwindCSS
- Machine Learning / Computer Vision: OpenCV, Scikit-Learn, Image Classification
- Libraries / Frameworks: Three.js, Streamlit
- Tools: Git, GitHub, VS Code
- Database: SQL (basic)

## PROJECTS

### Zenith - Solar Energy Planning & Decision Support System

- Developed a solar planning platform to analyze rooftop feasibility and estimate solar energy generation.
- Built interactive 3D visualization dashboards using React and Three.js to simulate solar installation scenarios.
- Implemented logic to evaluate solar feasibility using rooftop parameters, solar irradiance, and subsidy estimates.
- Designed modular UI dashboards for solar potential analysis and energy generation forecasting.

### AI vs Real Image Detector

- Developed a machine learning pipeline to classify AI-generated vs real images using texture-based features.
- Used OpenCV to extract image features and Scikit-Learn to train an SVM classifier.
- Implemented Local Binary Pattern (LBP) and GLCM feature extraction for image texture analysis.
- Built a simple Streamlit interface for uploading images and viewing prediction results.

## EDUCATION

- KIIT Deemed to be University - B.Tech, Computer Science & Communication Engineering - Expected Graduation: 2027
- Kendriya Vidyalaya, Burdwan - CBSE Class XII: 78.8% | Class X: 84%

## ACHIEVEMENTS

- Completed Pratham, Dwitiya, and Tritiya Sopan levels in Bharat Scouts & Guides.
- Top 3% global rank in Counter-Strike 2 Premier competitive ladder.

## INTERESTS

- Chess, piano and guitar, puzzle solving (Rubik Cube)