Biswajeet Ray

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SKILLS

- **Languages**: C++, JavaScript, Python
- **Frameworks**: HTML and CSS, Bootstrap, TensorFlow, Scikit-learn, OpenCV
- **Tools/Platforms**: MySQL, VS Code, Jupyter Notebook, Figma
- **Soft Skills**: Problem-Solving, Team Player, Adaptability

PROJECTS

Text-Based Adventure Game: Dec 2024 – Jan 2025

- Built an interactive text-based adventure game in Python featuring dynamic storytelling, player choices, and an inventory system for immersive gameplay.
- Engineered a modular game architecture with reusable components for characters, rooms, and branching narratives, ensuring scalability and ease of expansion.
- Tested and optimized game flow to support 100+ smooth player interactions, earning positive feedback for creativity, logical design, and intuitive command-line controls.

Tech: Python, OOPs

Face Emotion Detection with OpenCV: Jan 2025 – Feb 2025

- Developed a real-time emotion detection system using OpenCV and Haar Cascade for face detection, integrated with a CNN model for classifying emotions like happy, sad, angry, and surprised.
- Pre-processed facial images with grayscale conversion, resizing, and normalization to improve accuracy and performance during live video inference.
- Achieved over 85% detection accuracy on test data and enabled smooth, real-time emotion prediction through webcam input, enhancing human-computer interaction experiences.

Tech: Python, OpenCV, TensorFlow

Crop Quality Analysis Feb 2025 – April 2025

- Built an end-to-end crop quality analysis system using OpenCV and machine learning techniques to classify fruit quality based on colour, texture, and size features.
- Implemented feature extraction with colour histograms and trained an SVM model to distinguish high, medium, and low-quality fruit images, achieving over 90% accuracy on validation data.
- Designed a modular pipeline for image loading, preprocessing, feature extraction, and prediction, enabling efficient testing and integration with real-time or GUI-based interfaces.

Tech: Python, OpenCV, Scikit-Learn, Joblib, TensorFlow, Tkinter

CERTIFICATES

- Completed Mastery in Data Structure and Algorithm – Cipher School, May 2023 - July 2023
- Cloud Computing Fundamentals – by NPTEL Aug 2024 – Nov 2024

EDUCATION

Lovely Professional University , Punjab, India
• *Bachelor of Technology - Computer Science and Engineering;* ***CGPA: 6.4*** , *Since August 2022*

Zenith's Lion Gurukul , Bargarh, Odisha
• *Intermediate;* ***Percentage: 84%*** *April 2019 - March 2021*

DAV Public School , Brajrajnagar, Odisha
• *Matriculation;* ***Percentage: 91%*** *April 2007 - March 2019*