Kunal Routray

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# Professional Summary

# Aspiring Computer Science Engineer with hands-on experience in deep learning, computer vision, web development, game design, and multimedia editing (photo & video). Passionate about building intelligent systems and interactive software. Enthusiastic contributor to open-source communities like GSSoC.

# Education

## Bachelor of Technology (B.Tech) – Computer Science Engineering

Siksha ‘O’ Anusandhan University, Bhubaneswar

September 2023 – June 2027 (Expected)

# Technical Skills

* Languages: Python, Java, C++, JavaScript, Assembly
* Web Technologies: HTML, CSS, React
* Databases: MySQL
* Libraries & Frameworks: NumPy, Pandas, Scikit-learn, Matplotlib
* Tools & Platforms: Git, GitHub, VS Code, Jupyter Notebook, Tableau,

Godot Engine, EMU8086

• Editing & Design Tools: Adobe Photoshop, Adobe Premiere Pro, After Effects, Canva, CapCut, Filmora

* Others: OpenCV, MediaPipe, Flask

# Projects

## Human Activity Recognition

*Python, NumPy, Pandas, Scikit-learn, Matplotlib*

* Developed a hybrid CNN-BiLSTM model to classify six types of human activity using the UCI HAR dataset.
* Applied dropout regularization and batch normalization to optimize performance.
* Evaluated model with classification report, confusion matrix, ROC-AUC curve, and accuracy/loss plots.
* GitHub: Human Activity Recognition Project

## Emotion Detection System

*Python, HTML, CSS*

* Developed a real-time emotion detection web app using deep learning and OpenCV.
* Integrated with Flask backend and built a responsive front-end UI.
* Recognizes multiple facial emotions from live webcam input.

## Virtual Computer

*Python, NumPy, OpenCV, MediaPipe*

* Built a hand-gesture-based virtual computer interface.
* Enabled gesture-based interaction with a virtual mouse and keyboard.

## DSA Chatbot

*HTML, CSS, JavaScript*

* Created a chatbot to help users learn and revise Data Structures & Algorithms.
* Designed a clean front-end UI and implemented response logic with JavaScript.

## Amazon Clone Website

*HTML, CSS*

* Developed a pixel-perfect front-end clone of the Amazon homepage.
* Ensured responsive design and clean layout with semantic HTML/CSS.

## Demon Slayer 2D Game

*Godot Engine, GDScript*

* Designed a 2D platformer inspired by “Demon Slayer” anime.
* Added mechanics like enemy AI, scoring, and character animations.

## Balloon Blaster Game

*Assembly Language, EMU8086*

* Programmed a 2D shooting game in x86 Assembly.
* Used interrupts for graphics, bullet logic, and control mechanisms.
* GitHub: Balloon Game

## AI Trading Bot (In Progress)

*Python, Machine Learning, Pandas, NumPy, yFinance API*

* Designing an AI-based bot to analyze market trends and make trading decisions.
* Working on predictive modeling, backtesting, and real-time stock monitoring.

# Certifications

* Deloitte Australia Cyber Job Simulation – Forage (July 2025): Simulated incident response, log investigation, and suspicious activity analysis.
* Deloitte Australia Data Analytics Simulation – Forage (July 2025): Built a Tableau dashboard; analyzed business data using Excel.
* Deloitte Australia Technology Simulation – Forage (July 2025): Proposed a dashboard app design as part of a virtual product development team.

# Achievements & Community Contributions

• GSSoC ’25 Contributor – Actively contributed to open-source projects during GirlScript Summer of Code 2025.