

Amit Paul

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SUMMARY

A highly motivated software engineer with a strong background in Python, Java, image processing, and machine learning. During my internship at CDAC, I designed and built a forensic tool that cut the detection time of forgeries by 45% and increased the detection accuracy by 30%. I have a proven track record of creating efficient and user-friendly applications using PyQt, Tkinter, and Flask. My strong project management and communication skills enable me to apply my technical expertise effectively to solve complex real-world problems.

WORK EXPERIENCE

Project Intern at CDAC, Kolkata

Feb 2024 - Aug 2024

- Designed and engineered a forensic GUI using **Python** and **PyQt**, which **cut image forgery detection time by 45%**.
- Integrated key algorithms including SIFT, ORB, and DFT, to **increase detection accuracy by 30%** and reduce false positives.
- Implemented a real-time visualization module that **boosted team productivity by 25%** by enabling quicker result interpretation.
- Generated a diverse dataset of manipulated images to **reduce validation effort by 40%** and ensure higher reliability of the forensic tool.
- Delivered a visual and accessible tool to colleagues, **increasing research usability and adoption** and fostering cross-team collaboration.

SKILLS

- **Languages:** Python, Java, JavaScript, HTML, CSS, SQL
- **Frameworks/Databases:** Flask, PyQt, OpenCV, MySQL
- **Developer Tools:** VS Code, Git/GitHub, MS Excel, PowerPoint
- **Platforms:** Windows, Linux
- **Other Skills:** NLTK, JSON, Tkinter, DCT, SIFT, ORB

PROJECTS

• Attendance System - Image Analysis Based:

- Engineered an automated attendance system using facial recognition from group images to efficiently mark attendance.
- The project involved problem-solving and requirement analysis, demonstrating effective time management.
- Delivered a system that accurately marks attendance and generates a structured attendance table.
- **Technologies:** Python, OpenCV, TensorFlow, Flask, HTML, CSS.

• Service Buddy - Customer Service Chatbot:

- Designed a chatbot for customer service using Natural Language Processing (NLP) to provide automated support.
- The chatbot analyzes customer queries, provides instant, relevant responses, and handles common issues without human intervention.
- Showcased a user-friendly GUI for a seamless interaction experience.
- **Technologies:** Python, NLTK, JSON, Flask, Tkinter, PyQt, HTML, CSS.

- **Interactive Quiz Game:**

- Built an engaging game-based learning platform using Python and JSON.
- The application reads quiz questions and answers from a JSON file, calculates and displays the final score.
- Provides a simple and fun user experience for testing knowledge.
- **Technologies:** Python, JSON.

- **Cricket Analyzer - Python GUI Application:**

- Developed a GUI application to help users calculate cricket run rates and perform mathematical operations, including the D/L method.
- The application simplifies complex calculations through a simple and intuitive interface.
- Allows users to easily get accurate results by entering details like runs scored or overs played.
- **Technologies:** Python, Tkinter, and NumPy.

- **Image Analyzer - Advanced Image Processing GUI:**

- Designed an advanced Image Analyzer GUI for various image processing tasks.
- Performs quality assessment, metadata extraction, and forgery detection.
- Integrates algorithms such as SIFT, ORB, and DCT to provide a user-friendly interface for in-depth image analysis.
- **Technologies:** Python, PyQt, SIFT, ORB and DCT.

EDUCATION

2021 - 2025	B.Tech(CSE) at Techno Engineering College Banipur	(GPA: 8.38)
2021	Class 12th	(88.2%)
2019	Class 10th	(85.2%)

PUBLICATIONS

- **Research Paper:** Early Detection of Breast Cancer Using Logistic Regression Method. Published in International Journal of Engineering and Technology Management Science (IJETMS), Vol. 7, Issue 2.
- [Click here to view the paper.](#)

CERTIFICATIONS

- **Big Query for Data Analyst** (Google) 2025
- **Introduction to Artificial Intelligence** (IBM) Apr 2025
- **Crash Course on Python** (Coursera) Oct 2023
- **Enhancing Soft Skills and Personality** (NPTEL) May 2022
- **Ethics in Engineering Practice** (NPTEL) May 2022