

Utpal Raj

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GitHub: github.com/utpal16raj09 | LinkedIn: linkedin.com/in/utpal-raj-0380b6284

Portfolio: rajutpaltech.vercel.app (Desktop)

Professional Summary

Computer Science student with a strong foundation in algorithms and software development. Experienced in building AI and GUI-based tools using Python, OpenCV, and Tkinter. Passionate about solving real-world problems through practical, user-focused solutions.

Technical Skills

Languages: C, C++, Python, Java (Basics)

Tools and Frameworks: Git, GitHub, Tkinter, OpenCV, SQL, HTML, CSS, JS

Core Concepts: Data Structures, Algorithms, OOP, DBMS, Computer Networks

Soft Skills: Teamwork, Leadership, Adaptability, Quick Thinking

Projects

Text Comparison Tool

Mar 2024 – May 2024

Developed a desktop application that allows users to load or enter two different texts/files, compares them word-by-word, and highlights similar content using natural language processing techniques. Implemented user-friendly GUI with real-time comparison and similarity percentage display.

Tech: Python, Tkinter, nltk, difflib

Age & Gender Detection

May 2024 – June 2024

Built a real-time computer vision application that detects human faces from webcam feed and predicts age and gender using pre-trained deep learning models. Integrated 68-point facial landmark detection for enhanced precision and UI overlay.

Tech: Python, OpenCV (DNN), Caffe, TensorFlow

Personal Text Editor

Aug 2024 – Sep 2024

Created a lightweight text editor with a graphical interface supporting in-browser text editing, basic formatting (like bold, italic, font size), and file operations like save/load. Designed for smooth user experience with a clean UI layout.

Tech: Python, HTML, CSS, JS, Tkinter

Image Enhancement Tool

Feb 2025 – Mar 2025

Designed a desktop-based image processing tool that provides real-time preview for enhancement tasks like background removal, grayscale conversion, cropping, and Gaussian blur. Integrated AI-based rembg model for accurate background removal and delivered a clean, dark-themed GUI.

Tech: Python, OpenCV, rembg, Pillow, Tkinter

Education

B.Tech in Computer Science (Data Science)

2023–2027

SRM Institute of Science and Technology, Kattankulathur

CGPA: 9.53

Intermediate (Class 12)

2020–2022

St. Thomas Senior Secondary School (CBSE)

Percentage: 88.8%

Achievements

- 1st Place – Web3/Crypto Track, OSSome Hacks 2.0 (GitHub Community SRM)
- 3rd Place – AI Project Expo, SRM Institute of Science and Technology
- Solved 300+ DSA problems across LeetCode, GFG, etc. with a contest rating of 1600+

Certifications

- Programming in Java – NPTEL
- Python 101 for Data Science – IBM
- Image Processing, MATLAB Onramp (MathWorks)
- Deep Learning, Machine Learning – MathWorks
- C for Everyone – UC Santa Cruz (Coursera)
- Certificate of Achievement – HackWithIndia
- Problem Solving – SRM eLab Platform

Interests

Web Development, AI Tools, System Design, Open Source Contributions, Football (strategy teamwork), Sketching (creativity detail orientation)