Utpal Raj

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utpalr.vercel.app

Professional Summary

Driven B.Tech CSE student (CGPA: 9.53) with a strong foundation in software development and problem-solving. Solved 300+ DSA problems (LeetCode/GFG) and developed multiple AI and GUI tools using Python, OpenCV, and Tkinter. A quick learner passionate about building practical, efficient applications to tackle real-world challenges.

Technical Skills

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

Tools & Frameworks: Git, GitHub, Tkinter, OpenCV, SQL, HTML, CSS, JavaScript

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

Soft Skills: Teamwork, Leadership, Adaptability, Quick Thinking

Work Experience

Frontend Developer Intern – Optivix AI (Startup)   *Aug'25 – Oct'25*

optivixai.com

- Contributed to a growing AI-based startup by designing and developing its official website, improving brand visibility and user engagement by 40%.
- Implemented responsive layouts, optimized performance and SEO, and developed analytics dashboards to monitor visitor behavior and business metrics.
- Strengthened startup branding through modern UI/UX practices and cohesive design, aligning the web experience with the startup's AI-driven mission and outreach goals.

Projects

- **Text Comparison Tool**   Link
  Python, Tkinter, NLTK, difflib   *Mar 2024*

  Developed a desktop-based NLP application to compare and analyze textual data word-by-word using *NLTK* and *difflib*, achieving over *95% accuracy* in textual similarity detection. Implemented a real-time comparison engine with percentage-based similarity metrics, difference highlighting, and an intuitive GUI built in *Tkinter* for efficient document analysis and academic plagiarism checks.

- **Age & Gender Detection**   Link
  Python, OpenCV, Deep Learning (Caffe Model)   *May 2024*

  Built a real-time vision application to detect faces and predict age and gender from webcam feed. Achieved 93% face detection accuracy, 88% gender prediction accuracy, and 74% age group classification accuracy. Integrated 68-point facial landmark detection for enhanced precision with UI overlay.

- **Personal Text Editor** Link
  Python, HTML, CSS, JavaScript, Tkinter *Aug 2024*
  Created a lightweight text editor with GUI supporting in-browser editing, basic formatting (bold, italic, font size), and file save/load. Designed for smooth user experience with clean UI.

- **Image Enhancement Tool** Link
  Python, OpenCV, rembg, Pillow, Tkinter *Feb 2025*
  Developed a desktop-based image tool with real-time previews for background removal, grayscale conversion, cropping, and Gaussian blur. Integrated AI-based rembg for accurate background removal with a dark-themed GUI.

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 and achieved a contest rating of 1600+ on coding platforms.

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