

Piyush Raj

+91-9569924932 — prajindia012@gmail.com — linkedin.com/in/piyush-raj-902295253 —
github.com/PIYUSHRAJ012

Education

The National Institute Of Engineering

B.E. in Computer Science & Engineering, GPA: 8.585/10

Mysore, Karnataka

August 2023 – July 2027

Khelgaon Public School

Higher Secondary Certificate (Science with Computer Science)

Prayagraj, Uttar Pradesh

August 2020 – July 2022

Projects

- **Secure Image Steganography System** — *Python, Flask, Cryptography, NumPy, Pillow* — GitHub
 - Developed a secure image steganography web application to hide encrypted text and images inside digital images using the Least Significant Bit (LSB) technique.
 - Implemented password-based encryption using PBKDF2 and SHA-256 with AES-based Fernet encryption.
 - Designed randomized pixel embedding using password-derived seeds to improve resistance against steganalysis and unauthorized extraction.
 - Evaluated embedding performance using image quality metrics such as MSE, PSNR, payload capacity, and RGB histogram comparison.
 - Built an interactive Flask interface supporting secure embedding, extraction, and downloadable stego images.
- **Traffic Accident Data Analysis** — *Python, Pandas, Matplotlib, Seaborn* — GitHub
 - Developed a data analysis project to study district-wise road accident statistics from 2020–2023 using Python.
 - Processed and cleaned real-world accident datasets using Pandas and performed statistical analysis on crashes and fatalities.
 - Visualized yearly trends, district-wise comparisons, and crash–death correlations using Matplotlib and Seaborn.
 - Identified high-risk districts by computing total crashes and deaths and presenting insights through charts and plots.

Technical Skills

Programming Languages: Python, SQL

Web Technologies: HTML5, CSS3

Libraries & Frameworks: Pandas, NumPy, Matplotlib, Seaborn, Pillow, Cryptography

Tools & Platforms: Git, GitHub, VS Code

Databases: MySQL

Core Subjects: Data Structures & Algorithms, OOP, Database Management Systems, Operating Systems, Computer Networks, Cyber Security (Basics)

Certifications

- **Google Data Analytics Professional Certificate** — Coursera (Google) Feb 2026
Completed training in end-to-end data analysis including data cleaning, exploration, visualization, and reporting using SQL, spreadsheets, and Python.
Certificate Link
- **Programming, Data Structures and Algorithms using Python** — NPTEL (IIT Madras) July - Sep 2024
Elite certification focused on Python programming, problem solving, and core data structures and algorithms.
Certificate Link