

Agnivesh Singh

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EDUCATION

Bachelor of Science in Computer Science

2023 – May 2027 (Expected)

PES University, Bangalore

Current CGPA: 7.91/10.00

HSC, Class XII

2023

K.C. Public School, Jammu

92%

SSC, Class X

2021

La Martiniere College, Lucknow

93%

SKILLS

Languages Python, C, Java, Go, JavaScript

Technologies React, MongoDB, Streamlit, SQLite, Arduino, ESP32, MQTT

Tools Git, GitHub, Vercel, Tkinter

Concepts Data Structures & Algorithms, OOP, Networking, Role-based Access Control

Soft Skills Team Collaboration, Communication, Version Control Workflows

EXPERIENCE

Simulation Lab

Machine Learning Intern

- Developed a machine learning surrogate model (Random Forest, TensorFlow) to predict multi-output drone aerodynamic metrics, significantly accelerating traditional CFD simulation workflows
- Executed automated design space exploration algorithms, evaluating 100+ parameter combinations to instantly identify optimal minimum-drag configurations

PROJECTS

GoDrop — P2P LAN File Sharing Utility

Go | UDP | HTTP | github.com/notblankz/GoDrop

- Built a peer-to-peer LAN file sharing tool in Go with UDP-based service discovery (port 9999) and stale-peer cleanup
- Implemented an HTTP server for file browsing and transfer with a lightweight browser UI and CORS-enabled downloads
- Designed both single-server and P2P discovery modes with configurable file hosting (default port 8080)

IRC Chat System — ChudChat

Python | Sockets | JSON | github.com/Ori3nt/Chud-Chat

- Built a fully functional IRC-style chat platform using raw sockets with a client-server model supporting multiple concurrent users
- Implemented channel-based messaging with JSON-formatted packets and command-based UX (`/join`, `/help`, `/exit`)
- Developed a role-based admin system with secure controls for kick, ban, and admin promotion

Threat Intelligence & Network Analysis Platform

Python | Streamlit | SQLite | github.com/Ori3nt/DBMS_Project

- Developed a Streamlit-based intelligence DBMS simulator with Admin, Analyst, and Viewer roles and granular CRUD privileges

- Designed a SQLite-backed stored-procedure engine using parameterized SQL and registered user-defined functions (UDFs)
- Built GUI modules to manage users, triggers, and SQL procedures, with execution dashboards and analytical reporting

rePaste — React Note-Making Website

React | *MongoDB* | *SHA-256* | repaste.vercel.app

- Created a secure note-making web app with user accounts and SHA-256 password hashing; managed data via MongoDB backend
- Led front-end development in React; collaborated with two team members on full-stack integration

Noise Pollution Detection

Arduino | *ESP32* | *MQTT* | *IoT*

- Developed an IoT-based home noise detector using Arduino and ESP32 with DHT11 and sound sensors
- Implemented MQTT protocol for real-time data exchange and automated appliance control via a mobile app

Personal Portfolio Website

HTML | *CSS* | *JavaScript* | agnivesh.vercel.app

- Designed and developed a personal portfolio site; deployed via Vercel with custom domain configuration

Python Hangman Game

Python | *Tkinter* | github.com/0ri3nt/Hangman

- Built a Tkinter-based Hangman game with pre-generated word lists, custom sound effects, and dark mode support

ACHIEVEMENTS

- Accepted C N R Rao Scholarship from PES University (Top 25% in CSE Department in Campus in the 5th Semester)