

ADITYA SINGH

Ghaziabad, Uttar Pradesh

+91 8299769436 adityasingh10072003@gmail@gmail.com [LinkedIn Profile](#)

Education

Ajay Kumar Garg Engineering College

Bachelor in Computer Science - 8.3/10

Ghaziabad, Uttar Pradesh

2024-Present

Delhi Public School Kalyanpur- CBSE

Intermediate - 92.2

Kanpur, Uttar Pradesh

2019 - 2022

Experience

Virtual Internship Program

Dec 2023

Web Development

India

- Worked on learning the key components of HTML, CSS and JavaScript(basics).
- Implemented the learned things for making project given during the internship.

Data Structure and Algorithm Course

Sept 2024 - Present

Online Based

India

- Learned about different types of Data Structure and how they are used
- Engaged in problem-solving sessions, enhancing my coding skills while tackling complex coding problems.
- Gained insight about Logic Building and various Algorithms

Projects

RESTful API and CRUD Operations / NodeJS, MongoDB, ExpressJS, JWT

Sept 2024

- Developed a **RESTful API** using **Node.js** and **Express.js** to manage users and tasks with full CRUD (Create, Read, Update, Delete) functionality.
- **Implemented user authentication** using **JSON Web Tokens (JWT)** for secure, stateless user sessions and access control for protected routes.
- **Applied password hashing** with **bcrypt.js** to securely store user passwords and prevent unauthorized access.

Sudoku Solver / Python, Backtracking Algorithm

Sept 2024

- **Developed a Python-based Sudoku Solver** that utilizes the backtracking algorithm to solve any valid Sudoku puzzle efficiently.
- **Optimized the backtracking algorithm** to reduce the time complexity by validating each cell entry during recursive search, improving efficiency for larger problem sets.
- **Developed a clear, modular code structure**, making it easy to extend the functionality and incorporate additional solving strategies.

Binary Tree Visualizer / HTML, CSS, JavaScript

Sept 2024 - Ongoing

- **Developed an interactive Binary Tree Visualizer** using **HTML, CSS, and JavaScript**, allowing users to visualize binary tree structures including Max-Heap and Binary Search Tree.
- **Designed an input system** where users can enter arrays, and dynamically visualize the corresponding binary tree structures, max-heaps, and binary search trees through the use of custom algorithms.
- **Implemented tree construction algorithms** for various tree types, including **binary trees, binary search trees, and max-heaps**, to transform user-input arrays into graphical tree structures.

Skills

Languages: C/C++, HTML, CSS, JavaScript, Python(intermediate)

Technologies/Frameworks/Libraries: Node.js, Express.js

Database: MySQL, MongoDB

Others: GIT, AWS, Postman

Certifications

- CodSoft Virtual Internship Program - [Certificate](#)
- DSA Online Course - [Certificate](#)