

# Dhruv Maniar

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## EDUCATION

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**Texas Tech University**, Lubbock, TX December 2024  
*Bachelor of Science in Computer Science | Minor in Mathematics* GPA 3.33  
*Dean's Honor List | Presidential Merit Scholarship*

**The Cathedral Vidya School**, Lonavala, India May 2020  
*International Baccalaureate Diploma | IGCSE* GPA 3.8  
*Shibani Sen Scholarship | Class Valedictorian | Cock-House Trophy*

## EXPERIENCE

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**Marketing and Social Media Student Assistant** February 2023 – May 2024  
*First-Generation Transition and Mentoring Program, Texas Tech University, Lubbock, TX*

- Created digital marketing campaigns and engaging materials (graphics, videos, infographics) across platforms.
- Analyzed trends to optimize strategies, improving engagement and campaign effectiveness.

**Guest Service Specialist** May 2021 – June 2022  
*Texas Tech University Housing, Lubbock, TX*

- Provided comprehensive customer service at a 24-hour desk, handling in-person, phone, and online queries while managing operational needs.
- Managed mail, packages, and key distribution with strict adherence to federal guidelines, ensuring security and accurate record-keeping.

## PROJECTS

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**Toby's Terror** August 2022 – December 2022  

- Developed a 3D horror game using Unity, incorporating AI navigation via NavMesh and finite state machines.
- Developed immersive gameplay mechanics using C# for AI behavior and game interface communication.

**AlgoWhiz** (Project Leader) January 2024 – May 2024  

- Built an AI-powered educational platform using OpenAI, Python and Flask to analyze and teach complex algorithms to users.
- Utilized machine learning techniques to provide real-time feedback and detailed explanations.

**Dual-Tone Multi-Frequency Encoder and Decoder** (Project Leader) August 2020 – December 2020  

- Led a team to develop a DTMF decoder, analyzing sound signals to recognize keypad digit frequencies.
- Applied Fast Fourier Transform in Python, visualizing data from over 280 WAV sound samples with libraries like SciPy, NumPy, and Matplotlib.

**Valorant Discord Bot** (Project Leader) September 2023  

- Directed the development of a Python-based Discord bot, utilizing SQL for data management and YAML for configuration handling.
- Deployed on Google Cloud Platform, providing 24/7 access to over 18 million users globally.

**Shortest Path Finder** (Project Leader) August 2023 – December 2023  

- Developed an algorithm using Dijkstra's and Bellman-Ford to compute the shortest path between campus buildings.
- Modeled campus as a graph, optimizing travel routes by calculating distances between nodes (buildings).

## Live Weather App

January 2022 – May 2022

- Developed a weather forecasting app using Flask for backend API integration and JavaScript, HTML, CSS for frontend.
- Integrated OpenWeatherMap API for real-time weather updates and geolocation-based data.

## Course Sequencer (Project Leader)

August 2023 – December 2023

- Created a Python-based course recommendation system using Depth-First Search (DFS) and Topological Sort to optimize course sequences.
- Ensured prerequisite handling and reduced circular dependencies for efficient academic planning.

## Ticket Booking System

August 2023 – December 2023

- Built a Java-based ticket booking system, utilizing object-oriented programming principles for seat reservations and booking management.
- Designed real-time seat availability and integrated file handling for data persistence.

## Online Expense Tracker

January 2024 – May 2024

- Developed a full-stack finance management app using Flask for backend logic and JavaScript for dynamic expense visualizations.
- Integrated features for real-time tracking and categorization of user expenses, with monthly reports and insights.

## Elevator Operating System

January 2024 – May 2024

- Built a multithreaded C/C++ scheduler for an Elevator OS, managing input/output communication through asynchronous API calls.
- Implemented a scheduling algorithm to optimize elevator operations, ensuring efficiency and avoiding race conditions.

## Search Engine Reliability (Project Leader)

August 2023 – December 2023

- Designed a C++ program to evaluate the accuracy of search engines by analyzing ranking consistency using Merge Sort and Quick Sort algorithms.
- Calculated inversion counts to assess the reliability and relevance of search results.

## Portfolio Website

January 2023

- Designed and developed a personal portfolio website using HTML, CSS, and JavaScript to showcase projects and technical skills.
- Integrated responsive design and optimized loading times for seamless navigation and user experience.

## SKILLS/ CERTIFICATIONS

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### • Technical Skills

- **Programming Languages:** Python, C, C++, C#, Java, JavaScript, HTML, CSS.
- **Relational Databases:** Proficient in SQLite, MySQL, and MongoDB.
- **Data Science & Frameworks:** Skilled in using Data Structures, Numpy, Pandas, Matplotlib, Flask, React.js, Bootstrap, and R programming.
- **Development Tools:** Experienced with Unity Game Design, GitHub, Git, Figma, Visual Studio Code, Google Cloud Platform (GCP), and Power BI.

### • Certifications

- Google UX/UI Design Certification
- 100 Days of Python (Udemy)
- Web Designing Certification (Livewire)

