Dhruv Maniar

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EDUCATION

Texas Tech University, Lubbock, TX   December 2025
Bachelor of Science in Computer Science | Minor in Mathematics   GPA 3.33
Dean's Honor List | Presidential Merit Scholarship

The Cathedral Vidya School, India   May 2020
International Baccalaureate Diploma | IGCSE   GPA 3.8
Academic Excellence Scholarship | Class Valedictorian

EXPERIENCE

Marketing and Social Media Student Assistant   February 2023 – May 2024

First-Generation Transition and Mentoring Program, Texas Tech University - Lubbock, TX

- Designed and executed digital marketing campaigns across social platforms, producing graphics, videos, and infographics to boost program visibility.
- Analyzed engagement metrics and user trends to refine content strategy, resulting in increased student participation and outreach impact.

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

- Delivered customer service at a 24/7 service desk, resolving student inquiries across phone, email, and walk-ins while coordinating building operations.
- Oversaw mail, package, and key management systems with strict adherence to university and federal compliance protocols.

PROJECTS

Toby's Terror | *Unity, C#, NavMesh, FSM*   August 2022 – December 2022

- Developed an immersive 3D horror game implementing an AI enemy, incorporating pathfinding via NavMesh and finite state machines.
- Programmed UI components and interactivity logic using C# for gameplay mechanics.

AlgoWhiz | *Python, Flask, OpenAI API, Machine Learning*   January 2024 – May 2024

- Engineered an AI learning tool to teach algorithms with real-time feedback and natural language explanations.
- Integrated OpenAI's API to dynamically generate solutions and tutorials based on user inputs.

Dual-Tone Multi-Frequency Encoder and Decoder | *Python, FFT, NumPy, Matplotlib*   August 2020 – December 2020

- Led a team in decoding over 280 WAV samples using signal processing and Fourier transforms.
- Visualized frequency-domain signals for keypad tone identification and recognition.

Valorant Discord Bot | *Python, SQL, YAML, Google Cloud Platform*   September 2023

- Deployed a Discord bot on GCP, serving over 18 million global users with real-time game data and performance tracking.
- Integrated SQL for persistent storage and YAML for configuration management.

Shortest Path Finder | *Python, Graph Algorithms*   August 2023 – December 2023

- Created a campus navigation tool using Dijkstra's and Bellman-Ford algorithms to calculate optimal building routes.
- Mapped university layout as a weighted graph with buildings as nodes and improved traversal efficiency by 35%.

Live Weather App | *Flask, JavaScript, OpenWeatherMap API*   January 2022 – May 2022

- Built a responsive weather application integrating geolocation and dynamic API-driven weather data.
- Deployed user-friendly frontend using JavaScript, HTML, CSS and Flask for backend API integration with real-time search capabilities.

Course Sequencer | *Python, Graph Theory*   August 2023 – December 2023
- Built a course guidance engine utilizing DFS and topological sort for planning and prerequisite validation.
- Reduced academic scheduling conflicts by identifying dependency loops and optimizing flow.

Ticket Booking System | *Java, OOP, File Handling*   August 2023 – December 2023
- Created a CLI-based ticket management application featuring real-time seat status and reservation logic.
- Incorporated an interactive UI using Java Swing and file I/O for data persistence and history tracking.

Online Expense Tracker | *Python, Flask, JavaScript*   January 2024 – May 2024
- Implemented a real-time financial dashboard with interactive charts for monthly budgeting and insights.
- Enabled user authentication and persistent tracking via backend Flask endpoints.

Elevator Operating System | *C/C++, Multithreading, Asynchronous APIs*   January 2024 – May 2024
- Developed a multithreaded elevator simulation with custom scheduling, real-time routing, and file-based input parsing for 18,000+ time steps.
- Implemented thread-safe logic using mutexes and condition variables to manage concurrent I/O and prevent race.

Search Engine Analyzer | *Python, Sorting Algorithms, Data Structures*   August 2023 – December 2023
- Built a Python tool to assess search engine ranking consistency using inversion counts across 5 datasets.
- Implemented Merge Sort, Quick Sort, and Insertion Sort to compare ranking stability and consistency.

Portfolio Website   January 2023
- Developed a mobile-responsive portfolio site to showcase projects and technical proficiencies.
- Optimized SEO and load speed using lazy loading, compressed assets, and meta tags.

SKILLS/ CERTIFICATIONS

- **Technical Skills**
  - **Languages:** Python, C, C++, C#, Java, JavaScript, HTML, CSS
  - **Web & App Development:** Flask, React.js, Bootstrap, HTML/CSS, JavaScript, Unity (Game Development)
  - **Data & Analytics:** NumPy, Pandas, Matplotlib, R, Power BI
  - **Databases:** MySQL, SQLite, MongoDB
  - **Tools & Platforms:** Git, GitHub, GCP (Google Cloud Platform), Figma, Visual Studio Code

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