Dhruv Maniar

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EDUCATION

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

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 customer service at a 24-hour desk.
- Managed mail and packages following federal guidelines.

PROJECTS

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

- **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)