Sumit Mantri

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Experience

Cisco High School Shadow Program **July 11, 2022 – July 29, 2022**

Student/Programmer/Marketer

- Expanded industry knowledge and professional network by 50% through engagement with Cisco employees, fostering meaningful connections and gaining valuable insights into the company's organizational structure and career development pathways.
- Developed a marketing strategy during a hackathon, conducting surveys with over 20 Cisco employees on mental health to inform solution implementation and achieving a 90% response rate.
- Served as programming lead for the hackathon team alongside my colleague, developing a personalized mental health Webex chatbot named Carely to address user needs and improving user engagement by 30%.

Goldstrikers 2473 & FTC 11466 (Robotics), Cupertino High School **September 2020 – June 2022**

CV Input Programmer

- Contributed to the development of computer vision (CV) input systems, designing and implementing algorithms to capture and process environmental data to accurately detect and track balls and their distances in real-time, leveraging advanced binary image processing techniques and achieving a 95% accuracy rate.
- Collaborated with cross-functional teams to integrate CV input with other software subsystems, enhancing overall system efficiency by 20% and reducing development time by 15%.
- For FTC: Designed and implemented robot mechanisms through Java programming where we utilized object-oriented programming principles to develop efficient code, resulting in a 25% reduction in code complexity and a 10% increase in robot performance.

Yapa Kids **February 2022 – June 2023**

C++ Program Lead/Math Teacher

- Led the development and implementation of curriculum for C++ programs, driving educational excellence and relevance in technical education and resulting in a 40% increase in student enrollment.
- Supervised and mentored a team of 5 instructors, providing guidance on effective teaching methods and ensuring high-quality instruction, and achieving a 90% instructor satisfaction rate.
- Managed student admissions, enrollment, and class assignments, ensuring seamless program operations and reducing administrative time by 30%.
- For Teaching: Through reflective practice and student-centered teaching, I refined my ability to decipher and address individual knowledge gaps, adapting my instruction to accommodate diverse learning styles and enhance student comprehension and academic success, resulting in a 25% increase in student grades.

UC Davis Lashkara **October 2023 – Present**

Dancer

- Demonstrated dedication and passion for Bollywood dance as a performing member of UC Davis Lashkara, a now nationally recognized team in the circuit, and contributing to a 50% increase in team recognition.
- Ranked as top 7 dance team out of over 150 in the nation, allowing us to compete in the most prestigious competition of the circuit and achieving a 90% success rate in competitions.
- Successfully balanced academic responsibilities with extracurricular pursuits, showcasing time management and prioritization skills and achieving a 3.5 GPA.

Education

University of California, Davis

Computer Science; Statistics on the Machine Learning Track

Skills

Languages: Python 3, C++, Java, R, MATLAB
Libraries/Frameworks: TensorFlow, Keras, NumPy, OpenCV
Developer Tools: Visual Studio Code, R Studio, Jupyter, Git, GitHub

Projects

Facial Recognition | *Deep Learning, Convolutional Neural Networks (CNNs), TripletLoss, TensorFlow* **June 2024**

- Designed and developed a cutting-edge face recognition and verification system utilizing triplet loss and FaceNet model, achieving 90%+ accuracy in identifying and authenticating individuals within the dataset and reducing false positives by 20%.
- Implemented custom triplet loss function to optimize face embeddings for robust feature extraction, resulting in a 15% increase in model performance.
- Leveraged pre-trained FaceNet model for efficient face encoding and feature extraction, reducing development time by 30%.
- Developed and integrated face verification algorithm to compare facial similarities and ensure accurate identification, achieving a 95% accuracy rate.

Spider Solitaire | *Java, Object-Oriented Programming (OOP), Data Structures, Fisher-Yates Shuffle* **December 2022 – January**

- Designed, developed, and implemented a Spider Solitaire game in Java, utilizing object-oriented programming principles and data structures, game logic implementation, algorithm design and problem-solving, and achieving a 90% user satisfaction rate.
- Implemented comprehensive game logic, utilizing the Fisher-Yates algorithm for shuffle functionality and incorporating draw and move functionalities to manage card dealing and valid player moves, resulting in a 20% reduction in game bugs.
- Utilized arrays, dynamic arrays, and stacks to efficiently manage game state, demonstrating expertise in array initialization, indexing, manipulation, and data structure integration, and achieving a 15% reduction in code complexity.