Vedant Sinha
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EDUCATION

University of California - Merced   May 2026

Bachelor of Science, Computer Science and Engineering

- **Relevant Coursework**: Data Structures and Algorithms, Computer organization and Assembly, Linear Analysis, Algorithm and Design, Intro to AI, Linear Algebra, Discrete Math,
- **Honors:** Dean's List

WORK EXPERIENCE

TheCoderSchool, San Ramon, CA

Tutor   Nov 2023 - June 2024

- Created an inclusive learning environment that sparks curiosity and creativity.
- With a focus on **hands-on projects**, empowered young minds to explore the exciting world of coding, laying a strong foundation for their future in technology and worked with **Python, C, C++**

Sandstone INC, Pleasanton, CA   May 2023 - Aug 2023

Intern

- Improved data quality in the **Green light guru system**, Sandstone's product management lifecycle tool (PML).
- Helped the organization utilize the **object connectivity** to demonstrate the **interconnectedness** between products.
- Allowed users to **analyze, interact, and visualize** the relationships in their quality system in a ce**ntralized network view**

CODING PROJECTS

Housing Market Prediction Project   October 2024

- Made a **machine learning model** to predict housing prices using Python. Analyzed data with **Pandas** and **Seaborn**.
- Implemented **regression models** to forecast sale prices.
- Evaluated performance using **Mean Absolute Percentage Error** (MAPE) and **R-squared metrics**, achieving a prediction accuracy **81%.**

Facial Recognition System for Laptop Authentication| Python, OpenCV, face_recognition, PIL   October 2024

- Developed a **facial recognition-based system** for **laptop authentication**, utilizing **face_recognition** and **OpenCV** for **real-time image capture** and **face validation**.
- Implemented both **HOG** and **CNN** models for face detection, achieving high accuracy
- **Trained** and **optimized** face encodings with efficient data serialization using **pickle** for rapid recognition.
- Integrated a **visual interface** using **Pillow** to display face bounding boxes and results, enhancing system interactivity and usability**.**

Pac-Man Project   September 2024

- Implemented **pathfinding algorithms** (BFS, DFS, A*) for controlling Pac-Man and ghost AI.
- Optimized performance and **debugged** gameplay issues for smoother user experience.
- Gained hands-on experience in debugging, performance optimization, and game design logic.
- Utilized **Python** and **object-oriented programming** to enhance Pac-Man's movement and interactions within the game environment.

LEADERSHIP & COMMUNITY INVOLVEMENT

SAM Singapore Math   May 2024

Math Tutor

- Provided **personalized tutoring** in **mathematics** and **programming** to underprivileged youth, significantly improving their academic performance and fostering interest in **STEM fields**. Tailored lesson plans addressed individual learning needs, helping students build confidence in their abilities.
- Collaborated with fellow tutors to design engaging educational materials and resources, such as interactive worksheets, to make **complex concepts** more **accessible and enjoyable**.

Technical Skills

Technical Skills: Python, **C++**, **Java**, experienced in web scraping (Scrapy, Beautiful Soup),
database management (MongoDB), and software development (Agile, Git). Strong foundation in **mathematics** and **educational** tools