SAGAR SHAH

Email: infiniteocean100@gmail.com Phone: 714-406-4102

EDUCATION

Fullerton College, Cypress College, Santiago Canyon College, Santa Ana College **June 2020 - 2025**

117.5 units — 3.85 GPA — 6 Degrees — A.S. → Associates of Science; A.A. → Associates of Arts

A.S. in Engineering	A.S. in Computer Science	A.S. in Physics	A.S. In Mathematics	A.A. in Math and Science	A.A. in Art and Expression

Buena Vista Virtual High School | Top 1% for Class of 350 | 3.91 GPA **August 2021 - 2025**

Notable Coursework at Community College:

- Computer Science: CSCI 123 (Intro to C++), CSCI 133 (Data Structures in C++), CSCI 223 (C For Math and Science)
- Math: Math 171 (Discrete Mathematics), Math 172 (Graph Theory), Math 250AC (Multivariable Calculus), Math 250BC (Differential Equations and Linear Algebra), Statistics
- Physics (Calculus Based): Phys 221 (General Physics 1), Phys 222 (General Physics 2), Phys 223 (General Physics 3)
- Engineering: ENGR 203 (Circuits), ENGR 225 (AutoCAD), ENGR 110 (Intro to Engineering)

Programming Languages: Python (Pytorch, Numpy, SciKit, MatPlotlib), C++, C, Julia, Java, LaTeX, HTML, CSS, JavaScript, Swift
Frameworks and Tools: React, Node.js, TensorFlow, Docker, Git, ROS
Engineering Programs: Fusion 360, OnShape, AutoCAD, Arduino, Raspberry Pi, Ansys

EXPERIENCE

United States Air Force Research Lab | Materials, Manufacturing, and Aerospace Directorates **Summer 2024 – Present**

Student Researcher, Wright Patterson AFB, OH

- Working on next-gen control operations in the Aerospace Systems Directorate using control theory algorithms written in Julia (Submission to IEEE this November)
- Programming a Boston Dynamics Spot Robot Dog in the Manufacturing Directorate (CAMS Lab)
  - Autonomously cut a ribbon using computer vision for the lab's inauguration ceremony (https://tinyurl.com/57z42b7p)
  - Developing program for multi-domain accessibility (specifically the OptiTrack System to further collaboration with QUGVs)
- Created a GUI compatible with ARES OS for a Soft Materials lab in the Materials Directorate (code is published and in use)

Student Researcher | Fuller Lab @ Stanford University School of Engineering **Spring 2023 - Fall 2024**

- Developed machine learning pipeline using computer vision for pupil detection utilizing Meta's SAM 2 AI Model
- Worked in an interdisciplinary team to develop an app that detects ophthalmological disease (deployed to Altron)

NASA MINDS Competition — Grand Champions (Team of 10 students) **Spring 2024 - Fall 2024**

- Assistant designer of Echo and Eureka systems (item tracking and navigation systems)
- Lead Programmer — Wrote system algorithms & GUI of Echo & Eureka systems using C++ and Python
- Presented it to NASA panel, consisting of engineers and astronauts, from HQ and different space centers (KSC, JPL, JSC, etc.)

Applied Engineering Club | President @ Fullerton College **Fall 2023 - Spring 2024**

- Led the software and mechanical design of an unmanned aerial vehicle (UAV) for the C-UAS UAV competition at Cal State LA
- Autonomous Drone Racing Competition (A2RL)
  - One of the lead programmers for developing a fully autonomous drone with racing capabilities for the A2RL competition held in Dubai. As finalists of the US, our team was picked to go to Dubai, but that did not follow through due to funding issues.
- Taught over 40 students different engineering concepts such as utilizing CAD and programming Arduinos (beginner topics like flashing lights to advanced topics like PID controllers) throughout the quarter

Guest Teachers Assistant | Dr. R. Venook's BIOE 123 Class @ Stanford University **Spring 2024**

- Supported Dr. Venook and students in the BioEngineering Prototyping Lab class for a period of three weeks.
- Taught students how to utilize oscilloscopes, develop circuits, and design CAD models for professional engineering purposes
- Assisted students (undergraduate and graduate students) in developing custom centrifuges as part of their final project

HONORS & AWARDS

- US Air Force Wright Scholar (Summer 2024 — 1 of 15 out of 447 applicants; Summer 2025 — 1 of 23 out of 563 applicants)
- NASA MINDS Grand Champions — 1 of 50 schools to be selected nationally — Project concept deployed to 2026 Artemis Mission
- College Reading and Learning Association (CRLA) 1 Certified — Fullerton College — International English tutor certificate
- 2025 Fullerton College Student of Distinction—1 of 5 out of all 2025 graduates to receive scholarship for academic achievement
- Speech and Debate — Toastmasters International — Silver Medalist (1 rank from Gold) — Spoke in front of 300+ people