Arnav Akarte

(U.S. CITIZEN)

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Skills

- Proficient in CAD and CAM software (e.g. SolidWorks, Fusion360) for mechanical design and development.
- Developed ability to learn, grow, and implement new teachings, with a craving for knowledge.
- Unapologetically curious, with the ability to take risks and an accountability-focused mindset.
- Experienced with predictive modeling and simulation tools to inform design decisions (MATLAB, Simulink).
- Strong analytical skills for materials selection and technical specification analysis.
- Effective communication and teamwork skills, developed through leading collaborative projects.
- Knowledgeable in conducting risk assessments and creating detailed reports for engineering projects.
- Seasoned in quick learning, mastery, and implementation to adapt to new requirements and situations.

Experience

Loyola Marymount University: Mechanical Engineering | Los Angeles, CA

Undergraduate Research Assistant / Thesis Co-Author:

- Spearheaded research on additive manufacturing with titanium alloys, uncovering groundbreaking insights.
- Engaged in the selection of heat treatments and stress tests based on analysis of specifications and reliability, contributing to the enhancement of product quality.
- Authored critical thesis sections on Ti6Al4V alloy, revealing the effects of heat treatment and stress relief.
- Co-authored manuscript submitted to the Journal of Material Engineering and Performance for publication.

Precision Machining Technician:

- Upheld safety and precision in machining practices at the campus Machine Shop as teaching assistant.
- Applied correct geometric dimensioning and tolerancing for precise part and sample fabrication for academic and research purposes (GD&T).
- Expertise in operating Haas Mini Mill and Haas Lathe CNC machines utilizing g-code for diverse machining tasks.
- Proficiency in multiple additive manufacturing softwares/slicers and machines (Prusa, Cura).
- Supported the team in developing drawings for product features and carried out testing on standard features, identifying design flaws using advanced part analysis.

LMU Rocket Team Lead:

- Mastered and applied hybrid-fuel rocket and test fire stand design and testing, showcasing innovation.
- Collaborated on solid fuel, P&ID, sensors, nozzle, test stand, ignition, and injector designs, enhancing team capabilities.
- Led nozzle design, calculations, test fire stand design, FEA, and components of injection and ignition mechanisms, demonstrating technical leadership.
- Excelled in problem-solving and rapidly adapting to new concepts and skills, driving project success.
- Led a team to design and develop a mechanical system that improved efficiency by 20%, utilizing advanced predictive modeling for informed design choices
- Invited and attended as an exhibitor and presenter at the Reaction Research Society Symposium.

Archbishop Mitty FRC Robotics Lead

Archbishop Mitty High School | San Jose CA| Aug. 2016 - May 2020

- Mastered CAD and CAM to engineer a robotics chassis design and drivetrain, demonstrating technical prowess.
- Exercised leadership to guide a student team, making strategic decisions and mediating conflicts.
- Orchestrated meetings and subsystem communication, ensuring team synergy and a high-quality product.
- Achieved expertise in both Fusion 360 and SolidWorks, optimizing design, prototyping, and manufacturing processes.

Education

Loyola Marymount University Aug. 2021 - May 2024 ● GPA: 3.36 **Los Angeles, CA**

BS in Mechanical Engineering, Minor in Business Administration August 2021 – May 2024

- **Relevant Coursework:**
  - Design for Manufacturing (Injection Molding, Sheet Metal, CNC Mill), Design for Additive Manufacturing, Control Systems, Aerodynamics, Composites, Material Science, Fluid Mechanics, Spacecraft, Propulsion, MATLAB