NIKUL PATEL

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EDUCATION

Clarkson University Potsdam, NY
Double Major: Aerospace and Mechanical Engineering | Minor: Robotics | Honors Program *Expected Graduation: 2028*
Clubs and Organizations: SASE | Clarkson University DBF | AIAA | Underwater Robotics GPA: 3.96

PROFESSIONAL EXPERIENCE
Link to Projects embedded in Digital Version.

Undergraduate Research Assistant Jan 2025 – May 2025
Photoacoustic Research Laboratory *Potsdam, NY*
- Designed, prototyped, and 3D printed CAD components to secure sensors for autonomous ultrasonic data acquisition from pharmaceutical tablets, increasing measurement stability and accuracy by 20%.
- Collaborated with controls engineers on PLC integration and conducted iterative testing, improving system efficiency by 15% and scalability for continuous production.

Research Intern* Mar 2024 – July 2024
Spartificial *Remote*
- Analyzed and organized a dataset of 22,000+ samples across 22 classes and 4 timeframes; independently designed a Late Fusion multi-view CNN while leading a 2-member team on Early &Intermediate Fusion models.
- Achieved 95%+ accuracy for each model and 20% faster training , while optimization experiments improved predictive accuracy by 10% and processing efficiency by 15%.

Aerospace Structures Design Intern* Oct 2023 – Dec 2023
Feynman Aerospace *Mumbai, IND*
- Designed and assembled a 1U CubeSat structural model in SolidWorks, incorporating deployable antennas, solar panels, and frame assemblies; conducted comparative material evaluation (Al 7075-T6, CFRP, Ti alloys) to balance strength-to-weight and manufacturability.
- Performed finite element static and thermal load analyses in Ansys under launch and orbital worst-case scenarios, demonstrating a possibility of 25% increase in structural reliability and a 15% reduction in material usage.

LEADERSHIP AND ACADEMIC ENGAGEMENT

Teaching Assistant | MATLAB (HP102/103) | Clarkson University *Aug 2025 – Present*
- Co-Managing a fully TA-led honors course | Coordinating lectures, curriculum, assignments, grading, and office hours.

Team Member | Underwater Robotics | Clarkson University *Aug 2025 – Present*
- Designing and prototyping CAD components | Coordinating with others for seamless integration of controls systems.

Tutor | Introductory Engineering Courses | Clarkson University *Aug 2025 – Present*
- Supported fellow students with homework, and clarified difficult topics, throughout drop-in and small group sessions.

Class Senator | Student Association | Clarkson University *Sept 2025 – Present*
- Advocating for student interests through active participation in policy discussions and voting on key campus issues.

Class Representative | SASE (Society of Asian Scientists and Engineers) | Clarkson Chapter *Sept 2024 – Present*
- Representing my class, organized cultural and professional events, led fundraisers, promoting Asian heritage.

Admissions Ambassador | Undergraduate Admissions | Clarkson University *Sept 2024 – Present*
- Giving campus tours, performing outreach, assisting with administrative tasks, and answering front desk calls.

Undergraduate Coordinator | IMPETUS Program | Institute of STEM Education *June 2025 – Aug 2025*
- Co-designed a STEM module to teach middle-schoolers data-driven decision making through hands-on games designing.

Teaching Assistant | MA181 | Clarkson University *Jan 2025 – May 2025*
- Led discussion sessions for ~25 students | Resolved doubts in real time, and reinforced course concepts.

SKILLS

Programming Languages: MATLAB + Simulink, Python, Arduino embedded systems, ROS, LabVIEW(Basic)
Software and Cloud Platforms: SolidWorks, Ansys, Visual Studio Code, Microsoft Office Suite, Kaggle, Google Collab
Tech Skillset: CAD design, Machine learning, 3D Printing, Data Analysis, Experimental testing & prototyping

AWARDS

Presidential Scholar: Academic Excellence | *Clarkson University* *Fall 2024 & Spring 2025*
SASE Rising Leader: Recognition for strong leadership skills and proactive initiative | *Clarkson University* *April 2025*
Master BSMS: Nominated Best student of outgoing batch in all aspects. | *B.S. Memorial School* *Feb 2023*
Community Scholar: Highest academic performance at HSC Examination. | *Annual Community Gathering* *May 2023*