Priya Abiram Lakshmi Devi

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Cornell University, Mechanical-Aerospace Engineering Freshman of the Year Distinction, Honor Society

Engineering Experience

- **VAST Space Astronaut Life Support Design Internship,** May - August 2025
- **Inversion Space Design Engineering - Recovery Team Internship,** May - August 2024
  - Responsible Engineer for fully designing, manufacturing, and testing a full-scale parachute drop test vehicle housing avionics to test any payload weighing 15-50 lbs under multiple parachute types to obtain inflation data
    Extensive NX CAD design & drawing, ANSYS Analysis, Machining, 3D printing Experience
    Extensive Load Calculations, Parachute Steady State Calculations
  - Design a parachute packing fixture to efficiently pack different-sized parachutes under hydraulic press
  - Assist in night-time spacecraft recovery operations
- **Blue Origin New Glenn Systems Engineering Internship,** May-August 2023
  - Maintain manufacturing product structures for integrated products of the New Glenn Launch Vehicle under the guidance of vehicle stage production configuration leads
  - Create command media that describes structures of New Glenn launch vehicle's As designed and manufacturing Bill of Materials (BOM) for each product of New Glenn: First Stage, Upper Stage, Payload Accommodation
  - Provide recommendations for standardization of BOM methodologies to drive consistency across launch vehicle
- **NASA Kennedy Space Center Space Crop Production Internship,** January 2023 - May 2023
  - Write a whitepaper on the future trajectory of growing crops in lunar and martian terrain using in situ resource utilization
- **Cornell University Rocketry Team: Recovery and Payload engineer,** September 2022- Present
  - Responsible engineer of guided parachute system: Designed system to separate second stage of rocket and deploy steerable RAM-Air parachute; Design launch vehicle system layout; Machine shop trained
  - Conduct drone testing and airplane drop testing of parachute deployment & steering
  - High Power Rocketry Certified: Built L3 M impulse rocket to test RAM Air guided recovery system
- **NASA Lspace Academy: Deputy Principal Investigator for lunar dust buster,** May 2022- August 2022
  - Research and innovative dust vacuum system on the lunar surface: use electron beams to loosen up the electrostatically charged regolith that gets stuck to surfaces inside pressurized habitats on the moon
- **Boeing 777X Product Development Systems Engineering Internship,** June 2022 - August 2022
  - Contribute to design of future aircraft flight deck. Led incorporation and curation of proprietary input device designs. Assist in writing loft requirements (quantitative and qualitative), and influenced flight deck device layout
  - Independently increased aircraft systems knowledge through systems regressions tests, flight manuals
  - Pilot Persona Project to research capabilities, preferences, and training of next-generation airline pilots
- **Analog Astronaut Mission Chief Scientist**, November 2023
  - Chief Scientist on Analog Astronaut mission on top of Hawaiian Volcano. Researched methods to improve light technology on spacesuits and incorporate devices to reduce itchiness. Lead EVAs into lava flows simulating Mars
- **Citizen-Science Bioastronautics Research International Institute of Astronautical Sciences,** July 2021 - Present

  Spacesuit CAD Design, March 2025- Present
  AutoCAD & SolidWorks CAD multiple components of IVA Spacesuit such as helmet closure, life support components
  Microgravity Research and Spacesuit Evaluation BIO103, May 2022- Present

- Devise a Test Equipment Data Package for payload to fly microgravity and tested it in parabolic flight: Controlled solid rocket engine combustion in 0G, 1G, 2G to analyze the impact of G-forces on combustion, distortion in spatial awareness in microgravity, and 3D printing bioskin in microgravity to heal wounds for astronauts

  OPS 102: Spacecraft Egress and Rescue Operations
- Spacesuit and underwater training on landing phase of manned spacecraft missions on Neutral Buoyancy lab
- Nominal and contingency landing scenarios, post-landing planning, rescue and recovery architecture design, egress systems and operational procedures, deconditioning and post-landing survivability

  Introduction to Astronautics AST101, December 2021-February 2022
- Research in suborbital space flight simulator for IVA spacesuit evaluation, aerobatic flight training 6.5Gs, and hypoxia chamber certification. Tested on solar mechanics, space medicine, aeronomy
- Featured on GirlsInSTEM USA Show, Dazed Magazine UK, sending a video to the moon through Pledge to Artemis Artemis I mission, Women In Aviation

- **Cornell University Alpha CubeSat Engineer: Integration and Testing,** September 2022 - December 2023
  - Develop 1U cubesat satellite with a light sail for deep space exploration and testing holograms; launch into the International Space Station on SpaceX rocket
- **Women In Aeronautics and Astronautics Cornell President,** September 2023 - Present
  - Organize networking events, conferences, and information sessions with recruiters and industry experts to enable gender minorities to have better access to STEM industry opportunities.
  - Host podcasts, internship advice panel sessions, resume reviews, and create a student support system

Skills & Certifications

Engineering:
ANSYS, Computer-Aided Design: NX, Solidworks, Onshape, Open Rocket Software
Machine Shop Trained and Certified: Mill, Lathe, Haas, Big Track
AGI Systems Tool Kit Certification, OpenRocket
MatLab, Python Machine Learning (Tensorflo, Scikit, Numpy), Java, C++
Aviation: FAA Private Pilot, PADI Advanced Scuba Diver & Aquanaut
Professional Society Memberships: AIAA, WOAA, WIA, SWE, AOPA, SASE

Publications and Innovations

- Presented Makeup in Microgravity: Exploring vection and distortion in situational awareness under microgravity
- Published and Presented Harvesting Geothermal Energy on Martian terrain correlating thermal inertia and elevation for settlement on Mars. Won International Undergraduate research award at International Astronautical Congress
- Created patent-pending Artificial Intelligence-powered hat that improves navigation for the visually impaired. Featured by Cheddar News, Altice USA, Senators, News 12 New Jersey, Blind Veterans Association
- Created an outdoors portable charging system powered by solar panels and windmill utilizing renewable energy
- Improve heat regulation, collision resistance, seat belt mechanism in toddler car seats by integrating spacecraft life support systems under Don Rethke: lead life support engineer of Apollo 13 mission
- Use Pyrolysis and Catalytic Cracking of plastic to produce environmentally friendly fuel and reduce plastic
- Research applications of CRISPR gene editing to advanced medical treatment in biotech labs on the ISS

Awards and Honors

- **Cornell University [Quill & Dagger] Honor Society- selection to 1% of undergrads**
- **Cadet Lieutenant Colonel, Civil Air Patrol, US Air Force Auxiliary**
  - Lead and mentor 120 cadets (students) in 8 STEM research teams: Flight Simulators, Pilot Ground School, Model Rocketry, Robotics, Biomed, Comprehensive Java, Python, Orientation Flights
  - Establish a vision for cadet corps of 120+ in leadership, aerospace, physical fitness, emergency services
- **Congressional Award Gold Medalist**
- **AIAA (American Institue of Aeronautics and Astronautics) Diversity Scholar**
- **Cornell University Engineering Freshman of the Year**
- **2nd Place: International Astronautical Congress Undergraduate Research Award Paris, France**
- **Magazine Publications**: Dazed&Confused, Women In Aviation, Air Force Volunteer, Cheddar News, Inspiring Teens Magazine