AARIAN MEPANI

25 Juniper Lane, Syosset, NY 11791 | Mobile: 917 244 8242 | asm353@cornell.edu | linkedin.com/in/aarian-mepani-7b75a8232/

EDUCATION

Cornell University **Ithaca, NY**
Sibley School of Mechanical and Aerospace Engineering May 2027
Master of Engineering, Aerospace Engineering
Bachelor of Science, Mechanical Engineering; GPA**:** 3.90 / 4.00
Relevant Coursework: Dynamics, Statics & Mechanics of Solids, Space Structures, Fluid Mechanics, Thermodynamics, Circuits

RELEVANT EXPERIENCES

Cornell FSAE Racing **Ithaca, NY**
Mechanical Engineer (Unsprung Subteam) Sep 2024 – Present
- Designing mock upright, motor mounting, and electrical harnessing for dynamometer testing of the gearbox, cooling sleeve, and AMK
- Created mass-effective mounting for the rear diffusers, catch cans, and jacking bar in Autodesk Inventor, completed full analysis
- Welded, painted, and assembled the mounting onto the current vehicle; finished successful testing to ensure proper functionality
- Manufactured bearings, tab cones, clevises, and other EV components using mills and lathes; developed carbon fiber test panels

General Motors **Warren, MI**
Engineering Design Intern May 2025 – Aug 2025
- Created new designs for the rocker and rocker extensions for Cadillacs and Chevrolets using NX CAD on the Exterior Trim Team
- Designed the C-Pillar American Flag emblem for Hummers by developing exterior face, brackets, doghouses, and HC Files
- Implemented tooling for plastic injection molding, carbon fiber, and sonic welding into my parts to allow for manufacturability
- Performed FEA analysis using NX FEA Pre/Post on components, testing reactions to drag, fatigue, and human loading

Cornell Energy and the Environment Research Laboratory (EERL) **Ithaca, NY**
Mechanical Design Researcher Aug 2024 – May 2025
- Applied ANSYS topology optimization to minimize steel on solar arrays while maintaining strength, decreasing costs of photovoltaics
- Presented and authored a full research report to coincide with the results of optimization on various models of panel arrays
- Worked in the wind tunnel in Bellis Lab to measure pressure on models of solar arrays to simulate stress under extreme weather

Cornell Hyperloop **Ithaca, NY**
Magnetics Engineer Oct 2023 – Sep 2024
- Designed a damper guidance system in SolidWorks for the team's Linear Induction Motors for the pod to travel along a uni-rail
- Created a testing setup for the forces of the vertical levitation of the magnetically powered pod using custom-manufactured parts
- Led a detailed presentation of our project in front of hundreds of engineers, architects, and families at the New York Maker Faire

Hirani Engineering & Land Surveying, P.C. **Hicksville, NY**
Engineering Intern & Drone Pilot Jun 2023 – Aug 2023
- Utilized engineering CAD software AutoCAD Civil 3D to edit blueprints for critical infrastructure: roads, bridges, tunnels, sewers
- Tested to become a FAA-certified UAG drone pilot in New York, and was allowed to control industrial drones for surveying
- Worked on infrastructure for NYPD station, Columbia University, and more; made building renders and reorganized infrastructure

FIRST Robotics **Syosset, NY**
Vice President, Team Captain Sep 2019 – Jun 2023
- Designed and built the chassis and subsystems through CAD to simultaneously complete several unique tasks at annual competitions
- Organized a 15-member team while spearheading outreach, and single-handedly completed all team documentation to a winning level
- Qualified for Worlds (2021), Regionals (2020, 2021, 2022, 2023), and was FIRST Dean's List Semifinalist (2021-2022)

OTHER EXPERIENCES

ENGRD 2020 Statics and Mechanics of Solids **Ithaca, NY**
Teaching Assistant Jan 2025 – Jun 2025
- Taught 150+ students through discussion and office hours about essential topics, including stress, strain, torsion, and beam bending
- Managed lab sections, where students would experiment with these concepts by analyzing trusses, beams, and other structural systems

The CADemy **Syosset, NY**
Founder, Instructor Jan 2020 – Jun 2023
- Created an educational nonprofit platform to teach STEM, CAD, and robotics fundamentals to school students during COVID-19
- Recruited 12+ teachers and taught 500+ students for 400+ hours to create a fun and full-scale curriculum and interactive coursework
- Awarded the Presidential Volunteer Service Award for teaching over 100 hours in a single year and initiating the program

SKILLS & OTHER EXPERIENCES

Skills/Certifications:
Cornell Red Apron Machine Shop, Plastic Injection Molding, NX CAD, Autodesk Inventor SolidWorks, Fusion 360, ANSYS, Python, MATLAB, FAA Certified UAG Drone License, 3D Printing

Other Experiences:
Autodesk Campus Ambassador (2024-present)
Cornell Engineering Peer Advisor *(2024-2025)*
Cornell Sports Analytics Club Member *(2023-2024)*