# VARSHA SHYAM SUNDAR

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## EDUCATION

**Northwestern University**, Evanston, IL — Sept 2024 – June 2028
*Bachelor of Science in Manufacturing and Design Engineering (MaDE)* — ***CGPA: 3.29***
- **Activities:** Deeva Indian Dance Club, Accessible NU Volunteer

**Dhirubhai Ambani International School**, Mumbai, India — 2019 - 2024
*International Baccalaureate Diploma Program (IB), Grade 12* — ***IB score: 43/45***
*Indian Certificate of Secondary Education (ICSE), Grade 10* — ***99.6% (All India Rank 2)***
- **Activities:** Student Council, Model UN chair, Dance Committee Head, Theatre Club Head

## SKILLS

**Programming Languages & Tools:** Python, Java, Arduino IDE, Pico, ESP 8266, Arduino Uno, MATLAB
**Design Analysis Software:** Solidworks, Autodesk Fusion 360, Ansys, CATIA V5, Pix4D Mapper Pro, QGIS 3.28, PCB designing
**Manufacturing:** Manual Mill & Lathe, CAM on Autodesk Fusion, Laser cutting, Hand Tools, 3D Printing, TIG Welding, Composite analysis on Ansys ACP
**Online Courses:** Intelligent Machining (Digital Manufacturing & Design Tech Specialisation) by University at Buffalo (SUNY)

## EXPERIENCES

**PomWear, The Garage at Northwestern University** — March 2025 – Present
***Engineering Design and UIUX Team***
- Undertook hardware prototyping and CAD development for a start-up founded by Ms. Brittany Ransom (EDI – 2025) developing a wearable pain management device targeting PCOS and endometriosis
- Tested components including Peltier modules and TENS therapy units as part of PomWear's early-stage engineering team
- Designed user-centric mobile app concepts using statistics from market research surveys (100+ respondents), translating feedback into wireframes using Figma and iterating with AI-generated prototypes

**L&T Technology Services Limited (LTTS)** — July – Sept 2025
***Intern in Embedded Engineering Division***
- Interned at LTTS, a global leader (Mkt Cap: US$ 5.2 BN) in engineering and technology services
- Developed a Python automation tool using Selenium and XPath to extract data elements from a circuit breaker monitoring website of a large global power management company
- Conducted Life Cycle Assessment (LCA) process on the company's products to assess the carbon footprint and PEP (Product Environmental Profile) certify their designs

**Design Thinking and Communication at Northwestern University** — April – June 2025
***Project Manager and Design Lead under Prof. Michael Saubert***
- Led a 4-member team to design and build an accessible hook for a student with multiple disabilities applying Human-Centric Design principles
- Managed end-to-end product development including sketches, design reviews, final fabrication and documentation of requirements, testing and future scope

**QUARK Design Labs at Northwestern University** — April 2025 - Present
***Executive Board Member***
- Serving on the inaugural executive board of Northwestern's first Design club focused on rapid prototyping in Industrial Design and UI/UX
- As Lead - External Events, spearheading outreach to professionals in the industry to coordinate speaker events and foster industry-student engagement

## PRE-COLLEGE INTERNSHIPS & ENGINEERING PROJECT EXPERIENCES

**AU-FRG CAD- CAM Center, Anna University,** India (https://www.annauniv.edu/aufrgicc/) — June 2023
***Design Research Intern under Prof. Pradeep Kumar***
- Supported PhD students on the design of an Antenna Deployment Mechanism for leading Indian defence organisation
- Independently designed and tested Iso corner and bearing sub-assemblies used in the final design of the mechanism

**Zuppa Geo Navigation Technologies,** Chennai, India **(**https://www.zuppa.io/about.html) — Dec 2022 - Sept 2023
***Intern and Researcher***
- Assembled Quadcopter drone using open-source parts; programmed the drone using Mission Planner Ground Control Station software and piloted the drone under expert guidance
- Authored a paper exploring the use of Normalised Difference Vegetation Indices (NDVI) in precision agriculture and a WebApp for deduction of crop health; won Gold Crest Award; published in IJSHRE
- Used 16,000+ multispectral images of crop lands in 2 villages (Chitavi and Khamagao) in Maharashtra collected using UAVs by **DroneAcharya** (https://droneacharya.com/)