

Shubham Iyer

Cleveland, OH | +1 (440) 431-6880 | shubh.iyer@gmail.com | linkedin.com/in/shubhamiyer37

Seeking: Manufacturing, Test, or Chassis Engineering internship/co-op | **Available:** Summer 2027, or a Spring/Fall 2027 co-op

EDUCATION

Case Western Reserve University | B.S. Mechanical & Aerospace Engineering | GPA: 3.83 Expected May 2029
Fountainhead School, Surat, India | IB Diploma | 40 of 45 points, 2nd in class May 2025

ENGINEERING EXPERIENCE

Manufacturing & Test Engineer Aug 2025 - Present
CWRU Motorsports (Baja SAE)

- Machined 15+ unique drivetrain, suspension, and frame parts from 6061/7075 aluminum, 4130/4140 steel, Delrin, and UHMW for the SR26 competition car and the SR27 build.
- Held ± 0.001 in on press-fit bores while turning spacers, bushings, and steering and shifter inserts on the lathe; milled weld-jig fixture blocks and frame-tube notches so the frame could be welded in a fixed jig.
- Programmed multi-setup 3-axis Fusion CAM for the flyweight fixtures and ran the CNC jobs for flyweights and torque limiter hubs; machined the SR27 front inboard yokes on the 4th axis.
- Set up the team's newly purchased vacuum thermoformer and ran its first job, forming a spare set of Kydex bodywork panels for SR26.
- Caught cracks and deformation, including a cracked torque limiter hub, while tearing down and inspecting the 4WD assembly and front transfer case before competition; machined replacement parts and rebuilt both assemblies to torque spec before the event.
- Laid up carbon fiber for the SR26 seat and am comparing 0/90 woven against unidirectional fiber for SR27; building a cantilever bend fixture for carbon fiber tubing and planning torsion tests to judge it for the driveshaft and steering column.

Project Lead, Drivetrain Torsional Test Stand (4-person team) Aug 2025 - Present
CWRU Motorsports (Baja SAE)

- Leading the design of a stand that loads propshaft and front inboard/outboard yokes to failure over a 400 lb-ft range; finished preliminary CAD for the first design review and selected S-beam load cells, strain rosettes, and a DAQ.
- Built and ran an Ansys Workbench FEA of the 7075 aluminum yoke and spider in torsion to predict yield, so the stand's load and strain data can confirm or correct the model.

WORK EXPERIENCE

Teaching Assistant, EMAE 160 Mechanical Manufacturing Aug 2026 - Present
Case Western Reserve University

- Help run two 8-student lab sections machining the EMAE 160 hammer from part and assembly drawings; train students on manual mills, lathes, surface grinders, bandsaws, drill presses, and micrometers.
- Inspect each student part against drawing dimensions and GD&T callouts, then run final inspection on every hammer.
- Maintain lab machines (bandsaw blades, coolant, mill and lathe upkeep) and enforce PPE and shop safety.

PROJECTS

Adjustable Ladder Foot | Case Western Reserve University Jan 2026 - May 2026

- Designed an adjustable foot that keeps a ladder stable on uneven ground; led it from CAD and prototypes to consumer-product and mass-manufacturing presentations, revising the design after feedback at each stage.

Embedded AI Desktop Assistant | Sears think[box] AI Microgrant Jan 2026 - Apr 2026

- Designed the 3D-printed enclosure and assembled a Raspberry Pi 5 voice assistant with mic, speaker, and display; picked the electronics and wrote Python that calls cloud LLMs for web answers, reminders, and scheduling with ~5 s replies.

TECHNICAL SKILLS

CAD/CAM: SOLIDWORKS (CSWA), Siemens NX, Autodesk Fusion CAD/CAM, MasterCAM, Onshape, AutoCAD (Certified)

Analysis: Ansys Workbench (FEA and CFD), MATLAB, Python (NumPy, Pandas, SciPy, Matplotlib)

Manufacturing: 3- and 4-axis CNC milling, CNC and manual lathe, manual mill, waterjet, vacuum thermoforming, carbon fiber layup, 3D printing, SMAW and TIG welding

Quality: GD&T, reading and drafting engineering drawings, precision metrology, teardown inspection