

KRISHNA VAMSHI VEMURI

(480) 853-7526 | kvemuri4@asu.edu | linkedin.com/in/vemuri-vamshi

EDUCATION

Master Of Science, Mechanical Engineering

Arizona State University, Tempe

May 2025

GPA:4.0/4.0

- Awarded MORE scholarship for research in Manufacturing and Sustainability.

Bachelor of Technology, Mechanical Engineering

Mahatma Gandhi Institute of Technology, Hyderabad, India

July 2022

GPA:3.80/4.00

- Gold Medalist (Jawaharlal Nehru Technological University) and Best Outgoing Student (2018-2022).
- Department Topper (2019, 2021).
- Student Convenor – National Symposium, MGIT (February 2022).

TECHNICAL SKILLS

Manufacturing Processes: Additive Manufacturing (FDM, PBF, DIW), 3D Printing, CNC Machining, Lean Manufacturing.

Design Tools: SolidWorks, CATIA-V5, Fusion360, AutoCAD, GD&T, Design for Manufacturing (DFM), Design for Assembly (DFA).

Simulation Tools: ANSYS (Mechanical, Workbench, Fluent, Icepack, Thermal), COMSOL, MATLAB.

Quality and Process Improvement: Statistical Process Control (SPC), Minitab, Six Sigma (Green Belt), Process Optimization.

Licenses and Certifications: Certified SolidWorks Associate (CSWA), Additive Manufacturing Associate (CSWA-AM).

PROFESSIONAL EXPERIENCE

Design Engineer Intern | Insane Impact, Des Moines, Iowa, USA

October 2025 - Present

- Assisted in the design and documentation of AV and LED display systems, producing precise CAD drawings, shop drawings, and schematic layouts for fixed and mobile installations.
- Collaborated with the Engineering and fabrication teams to align mechanical, electrical, and structural specifications for seamless system integration.
- Contributed to R&D and process improvement initiatives, exploring innovative design methods and workflow enhancements for LED system engineering.
- Initiated and developed an FDM 3D printing based prototyping system to validate mechanical designs prior to release for full scale manufacturing and reduce design iteration cycle time.

Teaching Assistant | Arizona State University, Tempe, AZ, USA

January 2025 - May 2025

- Guided 200+ undergraduate students across two core courses: MEE 489 – Engineering Design II and MEE 491 – Experimental Mechanical Engineering. Led the Instrumentation Lab for MEE 491, overseeing setup, calibration, and execution of experiments involving temperature, pressure, and flow measurements.
- Mentored senior capstone teams in prototype development, validation testing, and ABET-aligned engineering practices.
- Provided technical support, project feedback, and documentation review to enhance student learning and engineering communication.

R&D Engineer | Edgeforce Solutions Pvt.Ltd, Hyderabad, India

March 2022 - November 2022

- Designed detailed parts and products using Fusion360 and SolidWorks, minimizing manufacturing errors by 15%.
- Created accurate CAD models for defense-related products, contributing to a 20% increase in project success rate.

Manufacturing Intern | KIRBY Building Systems, Hyderabad, India

October 2021 - November 2021

- Evaluated and streamlined five industrial manufacturing processes, including sheeting, hole-punching, box beam rolling, and upright rolling, to identify inefficiencies and improve production workflow.

PROJECT EXPERIENCE

Cross-Linked Polyethylene repurposing to High-Value graphene using Flash Joule Heating

Spring 2025

- Initiated a collaborative research project with Salt River Project (SRP) to address the challenge of recycling cross-linked polyethylene (XLPE) cable insulation waste to develop sustainable solutions for effective waste management.
- Engineered a scalable FJH process to convert Cross-Linked polyethylene composites into high-value graphene.
- Demonstrated up to 98% yield of graphene carbon structures, supporting circular material flows.

Thermo-Mechanical Analysis of Solder Joint in 3D Chiplet Package

Fall 2024

- Optimized solder joint design in 3D chiplet packaging using ANSYS (Icepack, Thermal) Workbench, diminishing thermal hotspots by 25% and enhancing thermal dissipation efficiency by 30%.
- Performed parametric analysis on pitch gap and solder joint height, decreasing stress concentration by 20% and increasing mechanical reliability.
- Validated simulation results with experimental data, achieving 95% accuracy in predicting thermal fatigue and failure mechanisms.

Powder Bed Fusion (PBF) Additive Manufacturing Simulation

Spring 2024

- Simulated laser-based powder bed fusion processes using COMSOL, improved laser power and scan speed to reduce thermal stress in Aluminum 6063 and Steel AISI 4340 by 25%.