Akash Tambe | Mechanical Engineer

Pune, India +91 ••••• ••••• akasht1934@gmail.com
linkedin.com/in/akashtambe akashtambe.com

Mechanical Engineer with over three years experience in CAD, FEA and product development for OEMs and R&D teams. Proficient in SolidWorks, Creo, ANSYS and rapid prototyping. Completed Master's degree in Mechanical Engineering at Carnegie Mellon University, specialising in design and manufacturing.

Work Authorisation: Eligible for EU Blue Card and willing to relocate across Europe.

Experience

Kashmir World Foundation — Great Falls, VA
CAD Engineer — Aug 2024 - Jul 2025

- Led design of internal aircraft structures using Rhino 7 and OpenVSP for a 25-kg blended-wing-body drone.
- Managed and coordinated a team of trainees to optimise the layout of payload systems, ribs, and landing gear.

Friction Welding Technologies — Pune, India
Mechanical Engineer — Jan 2022 – Dec 2022

- Designed and developed a 60-ton friction welding machine (valued at €320,000) using SolidWorks and AutoCAD.
- Migrated 1000+ legacy CAD models to EPDM, improving data management and project workflow.
- Integrated customer and supplier feedback to optimise machine design and delivery.

JMA Wireless — Syracuse, NY
Mechanical Engineer — Jun 2020 – May 2021

- Developed ceiling and stadium antennas using SolidWorks PCB and electromechanical packaging design.
- Used 3D printing for prototyping, reducing development time by 30%.
- Performed RF testing and validation using Six Sigma and Root Cause Analysis.

Education

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Mechanical Engineering — Jan 2023 – May 2024

- Concentration: Design and Manufacturing
- GPA: 3.94/4.00

University at Buffalo — Buffalo, NY
Bachelor of Science in Mechanical and Aerospace Engineering — Aug 2016 – May 2020

- Honours: Summa Cum Laude & Dean's List
- GPA: 3.77/4.00

Key Projects

Stair-Vacuum Robot
Pittsburgh, PA

Carnegie Mellon University **Jan 2024 - Apr 2024**

- Developed and designed an autonomous stair-cleaning robot in PTC Creo, focusing on robust tank-tread mobility and stability.
- Fabricated and assembled components using laser cutting, 3D printing, and machining, maintaining precision within a $900 budget.
- Conducted comprehensive testing to optimise performance and durability across varied stair configurations.

Friction Welding Machine
Pune, India

Friction Welding Technologies **Jan 2022 - Sep 2022**

- Managed the entire project lifecycle of a 60-ton friction welding machine, using SolidWorks and AutoCAD for detailed design.
- Performed FEA using ANSYS and FMEA techniques to enhance structural integrity and mitigate failure modes.
- Oversaw the fabrication of CNC and sheet metal components, ensuring precision through GD&T standards.

Compact Ceiling Antenna
Syracuse, NY

JMA Wireless **Oct 2020 - Dec 2020**

- Designed a compact, 10×10-cm omnidirectional antenna using SolidWorks and AutoCAD, optimizing RF performance and manufacturability.
- Employed 3D printing for rapid prototyping of snap-fit features, ensuring secure PCB integration with injection-moulded casings.
- Conducted ANSYS simulations to ensure optimal signal quality and performance.

Stadium Antenna
Syracuse, NY

JMA Wireless **Jul 2020 - Sep 2020**

- Designed and developed stadium antennas for NFL stadiums using SolidWorks and AutoCAD to enhance wireless connectivity.
- Built and tested 8 prototypes, ensuring structural integrity and optimal performance in varied conditions.
- Designed and fabricated sheet-metal mounting brackets to meet customer-specific requirements, improving installation efficiency.

Skills

CAD/FEA:	SolidWorks, PTC Creo, AutoCAD, ANSYS, Inventor, Rhino, Siemens NX, CATIA
Manufacturing:	Machining, CNC, Laser Cutting, Sheet Metal, Injection Moulding, 3D Printing
Programming:	MATLAB, Python, LaTeX, HTML/CSS, JavaScript, Arduino, Microsoft Office
Languages:	English (C2), Hindi (C2), Marathi (C2), German (A1)