

# Abhishek Nair

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Mechanical Engineering graduate student specializing in manufacturing, vehicle dynamics, and mechatronics. Over 4 years of internship and work experience, demonstrating strong leadership skills, effective communication abilities, and a collaborative approach to teamwork. Proven problem-solving capabilities to efficiently and creatively tackle complex challenges.

## EDUCATION

**Bachelor of Engineering in Mechanical Engineering** | Purdue University West Lafayette | May 2023

**Master of Engineering in Mechanical Engineering** | Purdue University West Lafayette | Dec 2024

## TECHNICAL PROFICIENCIES

**Skills:** Geometric dimensioning & tolerancing, CAD (CREO Parametric, Siemens NX, Fusion 360), MS Office, Excel (Statistical modeling, Pivot tables, VBA), LabVIEW, Control System design (Simulink)

**Programming Languages:** Python, MATLAB, HTML, CSS, LaTeX, Arduino, VBA

## PROFESSIONAL EXPERIENCE

**Manufacturing Intern** at Mahindra & Mahindra, Chakan, India

May 2022 – August 2022

- Developed a Simulink based vehicle powertrain model compatible with the existing vehicle lineup, using vehicle data and drive cycles to estimate range and fuel efficiency for all viable models
- Designed a heat-map of EV adoption viability by cross-referencing simulated and current EV data with the Indian EV charging network to produce insights on EV viability in 2022 and beyond
- Conducted 5G connectivity reliability issue root cause analysis for rear demister antenna installations, reducing drops in connectivity by 24%.
- Improved VR training programs for new associates by assisting in designing an improved housing for an HTC Vive Pro controller with an additional tracker for a more intuitive design emulating a pneumatic paint sprayer. Using Kaizen principles of continuous improvement, VR adaptation time was reduced from 3 hours to 45 minutes for associates unfamiliar with VR.
- Worked directly under plant engineers in each stage of vehicle manufacturing and gained understanding of overall SUV and heavy equipment manufacturing operations.

**Supply Chain & Logistics Intern** at ITC Limited, Mumbai, India

May 2021 – August 2021

- Automated the process of cleaning and processing raw Vendor data, which was then statistically analyzed using Excel macros and VBA programming to produce data insights on local, state and country-wide scales, reducing process time from 4 hours to 7 minutes.
- Established inventory targets, stock level, and waste mitigation targets and managed flexibility strategy using data gathered from the Excel dashboard to optimize inventory and minimize the impact of Covid-19 on the supply chain within Mumbai.
- Wrote clear documentation for developed code, including troubleshooting information for posterity and suggestions on dashboard improvements.
- Presented findings on waste mitigation strategies to senior management, with implemented suggestions reducing perishable product wastage by 36%.