

Shubham Khawale

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EDUCATION

Master of Science in Mechanical Engineering | Purdue University | West Lafayette, IN | August 2023

Bachelor of Engineering in Mechanical Engineering | Savitribai Phule Pune University | Pune, MH | June 2019

EXPERIENCE

Dayton Phoenix Group, West Lafayette - *Product Engineer* Dec 2023 - Present

- Implement design changes (ECNs) and modifications across 10+ components for part and process improvement
- Collaborate in development, testing, & manufacturing of OEM dynamic braking systems for OHV & locomotives
- Research IoT-based smart braking systems to enhance safety, energy efficiency, and reduce maintenance cost

Eminence Speaker LLC, Kentucky - *Design Engineering Intern* Aug 2022 - Dec 2022

- Produced 2D drawings and 3D models for 100+ transducers using Creo while working in R&D with full ownership
- Created a VBA database system, accelerating product data management efficiency and decreasing lead time
- Supported QC efforts by conducting inspections, acoustic measurements, and tests on prototypes and samples
- Gained knowledge and experience in transducer power testing according to EIA and AES standards
- Acted as point of contact for customers for new products and provided engineering support for 10+ projects

ARC UAS Inc, West Lafayette - *Robotics Engineering Intern* June 2022 - Aug 2022

- Created rapid prototypes leveraging DFM & 3D printing techniques to build winch systems for package handling
- Led software development for UAV simulations using Robot Operating System (ROS) and machine learning
- Partnered with hardware and software teams to integrate electronic components for optimal drone functionality

Sanjay Electronics, India - *Product Design Engineer* June 2019 - July 2021

- Managed product development of home and pro audio systems from concept, prototype, manufacturing, and testing to validation. Delivered products exceeding clients expectations, accomplishing a 95% satisfaction rate
- Utilized hand/power tools to build and evaluate prototypes ensuring functionality validation before production
- Crafted engineering documentation, specification sheets, and CAD drawings for electromechanical systems
- Identified electromechanical failures using root cause analysis methods, reducing system failures by 30%
- Applied knowledge in materials, manufacturing processes (sheet metal forming, perforation, machining, injection molding), PCBs, and Design for Manufacturing (DFM) for a seamless product development cycle

Sanjay Electronics, India - *Mechanical Engineering Intern* June 2018 - May 2019

- Performed stress and deformation simulations on rigging hardware using ANSYS Finite Element Analysis (FEA)
- Generated Bill of Materials (BOMs) for 15+ products, optimizing inventory & reducing production costs by 20%

PROJECTS

Kitchen Sink Water Recycler Jan 2023 - April 2023

- Led product development using design thinking methods, visual prototyping, value engineering analysis (VA/VE), QFD, & circular design. Analyzed product launch strategy, marketing tactics, business model, & product lifecycle, yielding profound insight into target market demands and uncovering potential competitive advantage

Autonomous Free-Throw Robot Sep 2021 - Dec 2021

- Designed a 4-wheel mecanum drive robot with a ball launching mechanism to shoot balls into basketball hoops
- Programmed basketball shooting robot using Arduino capable of shooting hoops with 75% success rate

SKILLS

Technical: Product Development, Mechanical Design, System Integration, Project Management, Six Sigma

Software: Creo, SolidWorks, Fusion 360, AutoCAD, Ansys, COMSOL, MATLAB, Simulink, Python, MS Office

Audio: KLIPPEL, ARTA, AKABAK, LMS, REW, VituixCAD, Klippel 'Linear Lumped Parameter Measurement' Certificate