

# AKSHAY HIREMATH

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## EDUCATION

**Master of Science, Mechanical Engineering | GPA: 3.05** **Apr. 2022**

*Western Michigan University (WMU) | Kalamazoo, MI, USA*

*Relevant coursework: Theoretical Computational Fluid Mechanics, Advanced Thermal Design, Advanced Heat Transfer I, Thermoelectric Materials, Advanced Product Engineering, Experimental Methods in Fluid Mechanics.*

**Bachelor of Engineering, Mechanical Engineering | GPA: 3.18** **Apr. 2017**

*Solapur University | India*

## PROFESSIONAL EXPERIENCE

**Graduate Research Assistant | WMU | Kalamazoo, MI, USA** **Dec.2021 – Present**

- Working on PEM fuel cell technology at Fuel Cell Evaluation and Research Center for development of hydrogen fuel cell powertrain.

**Graduate Researcher | WMU | Kalamazoo, MI, USA** **Apr. 2020 – Present**

- Optimized various parameters for a 3D hybrid metal printing machine (Additive Manufacturing).
- Designed various parts for Additive Manufacturing using AutoCAD, Fusion 360, and Inventor.
- Developed CNC programs manually and with Fusion 360 and InventorCAM.
- Manufactured aluminum tensile parts on a 3D hybrid metal printer and 3-axis CNC machines for mechanical testing.
- Scanned and created a data set of 300+ aluminum welding samples for AI and ML.
- Gained experience in designing and 3D printing of FDM printers for PLA and ABS materials.

**Customer Service Associate | Amazon | India** **Sept. 2018 – Apr. 2019**

- Provided timely, accurate, and professional customer service to Amazon customers via phone calls, emails, and chat.
- Promoted within a 4-months timeframe to business department based on a strong work ethic and verbal communication skills to interact with Amazon business partners, retailers, and merchants.
- Provided effective solutions to customer problems such as locating a package, expediting orders, correcting post-sale issues.

**Pro-Term Lecturer | Solapur University | India** **Sept. 2017 – Dec. 2017**

- Taught the Tool Engineering course.
- Conducted hands-on machine workshop and lab sessions for students on the lathe, drill, and milling machines.
- Coordinated the Study Abroad Cell for students in collaboration with the professor and students.

**Engineering Intern | Taneja Aerospace and Aviation Ltd. | India** **Dec. 2015 – Jan. 2016**

- Studied polymer matrix composites and carbon matrix composites.
- Studied various aerospace part manufacturing and aircraft assembly.
- Conducted domestic airport study consisting of airport structure, hangars, ATC, and maintenance.

**Engineering Intern | Precision Camshafts Ltd. | India** **Jun. 2015 – Jul. 2015**

- Studied Industrial Automated Robotic Arm for manufacturing of camshafts.
- Coordinated with foundry engineers, technicians, and management staff to learn industry culture and professional work ethics.
- Observed and studied the camshaft manufacturing process (raw material to final product).

## PROJECTS

- Bronco Army's – Bronco Blaster Product (Team Leader): Designed, developed, and fabricated Catapult in a team of 6 graduate students. Performed the testing, DOE using JMP software, capability, and robustness assessment of the final product. (2021)
- NASA's Lunar Loo Challenge: Designed, developed, and analyzed a human waste management system for males and females to operate in lunar and micro-gravity. Collaborated with a team of 6 researchers around the globe. (2020)
- Solar Powered Self-Balancing Vehicle: Manufactured two-wheel self-balancing vehicle as a senior design project in a team of 5 students. Utilized solar panels to produce electricity and developed a cost-effective vehicle for numerous purposes. (2017)

## SKILLS

- |                                  |                                       |               |
|----------------------------------|---------------------------------------|---------------|
| • Additive Manufacturing         | • Microsoft Office: Excel, PowerPoint | • DFMEA       |
| • Product Design and Development | • CFD and ANSYS                       | • Python      |
| • FMEA                           | • Fusion360                           | • MATLAB      |
| • Leadership and Management      | • CATIA                               | • InventorCAM |
| • GanttPRO                       | • SolidWorks                          | • AutoCAD     |