KAUSTUBH DHAWALE

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EDUCATION

Arizona State University   *August 2022 - May 2024*
Master's, Aerospace Engineering   *GPA: 3.13*

Savitribai Phule Pune University   *August 2017 - May 2021*
Bachelor's, Mechanical Engineering   *GPA: 8.72*

SKILLS

Mechanical Engineering Skills: MATLAB, CAD, AutoCAD, PTC Creo, ProE, Ansys workbench, Ansys Fluent, Product Design, SolidWorks, CFD, GD&T, Operations Research, Thermal Engineering, Product management, 3D Printing, Finite element analysis, Structural Modelling, Dynamic Modelling, Regression Analysis.

Software Skills: Python, R, R markdown, iOS/Swift, Excel/Numbers/Sheets, HTML/CSS, Computer Vision, Graphic Design, Canva, Jupyter, Keras, Natural Language Processing (NLP), OpenCV, Pandas, Pytorch, Video Editing, Design, Keras, Technical report writing, Presentations, MS office suite, GPT developments, Adobe creative suits.

PROJECT AND OUTSIDE EXPERIENCE

MEDICAL COST ANALYSIS: PREDICTING MEDICAL COSTS BASED ON PEOPLES DATA   **Tempe, AZ, USA**
Engineer   *January 2024 – April 2024*
- Applied linear and polynomial regression to predict and estimate the cost of medical insurance based on peoples data like age, gender, habits and region. The model was further improved by feature engineering to a root mean square logarithmic error of 0.39.

ANALYSIS TOOL FOR PARAMETRIC STUDIES OF RAMJET PROPULSION PERFORMANCE   **Tempe, AZ, USA**
Design Engineer   *September 2023 - December 2024*
- Developed a MATLAB-based parametric analysis tool for non-ideal flow path analysis in ramjet/scramjet engines with a fixed-geometry, converging-only nozzle.

CAMOUFLAGED HUMAN TARGET DETECTION BASED ON DEEP LEARNING   **Tempe, AZ, USA**
Engineer   *September 2023 - December 2024*
- Built a machine learning model using the YOLOv5s algorithm optimized for detecting camouflaged human targets by integrating a multispectral channel attention module and employing a lightweight up-sampling operator, achieving high precision and recall on the MCPD, with a prediction accuracy of 93.7%.

DESIGN OF PROPELLANT FEED SYSTEM FOR THE RS-25 ENGINES   **Tempe, AZ, USA**
Design Engineer   *September 2022 - December 2023*
- Designed propellant feed system for the RS-25 engines that were used as the Space Shuttle main engines (SSMEs) and are planned for use on early flights of NASA's Space Launch System (SLS).

FLOATING WEATHER STATION FOR BATHYMETRY AND WEATHER MONITORING   **Pune, MH, India**
Design Engineer   *August 2020 - February 2021*
- Designed and integrated an IoT enabled floating buoy for data collection of small water bodies. Primarily responsible for design (on PTC Creo), CFD testing and simulations on ANSYS.

ENTREPRENEURSHIP

FOUNDED AN ECOMMERCE WEBSITE - KitaBUY   **Pune, MH, India**
Founder/CTO   *August 2019 – April 2022*
- Founded KitaBUY strategically marketed products and optimized online sales tactics, generating a net profit of over ₹50000 within first two months of launch.

FOUNDED AN ENGINEER'S COMMUNITY -DOT labs   **Pune, MH, India**
Founder/CTO   *May 2019 - December 2020*
- Founded DOT labs, a community with over 2000 members, providing consultation on 50+ engineering projects resulting in enhanced client project efficiencies.