JAYDUTT KULKARNI

jkulkarn@andrew.cmu.edu**|** 646-239-9816**|** linkedin.com/in/jaydutt-kulkarni**|** jd-kulkarni.github.io

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EDUCATION

Carnegie Mellon University (CMU)   Pittsburgh, PA
Master of Science in Mechanical Engineering – Research   December 2022
Courses: Optimization, Machine Learning, Computer Vision, Visual Learning and Recognition, Deep Learning   GPA: 4.0/4.0

Vishwakarma Institute of Technology (Savitribai Phule Pune University)   Pune, India
Bachelor of Technology - Mechanical Engineering   May 2016
Class Rank: 6, out of 195 (First Class, with Distinction)   GPA: 9.4/10.0

WORK EXPERIENCE

Tata Technologies Limited (Client: **McLaren Automotive Limited**)   July 2016 – August 2020
Developer – PLM (Product Lifecycle Management)   Pune, India

- Co-ordinated between teams in Woking and Pune, and consolidated Bill of Materials (BOM) Lead role for McLaren GT.
- Demonstrated domain knowledge of SAP PLM system, BOM, Change Management, and Supply Chain Management to support multiple New Product Introduction (NPI) gateways and conducted Knowledge Transfer sessions in a team of 25.
- Led a four-person team to devise and set up infrastructure for 'Kitting' – an exercise performed to validate and fix list of components generated for every car being built to improve quality of build, as a Product Data Management Coordinator.

BOM Lead (Woking, United Kingdom)   March 2018 – September 2019

- Led two vehicle programs as BOM Lead: **720S Spider and GT**, while deputed at **McLaren Technology Centre**; Worked with cross functional teams to resolve issues in engineering, production and supply chain management areas.
- Created 19 Continuous Improvement requests and provided exhaustive consultation to improve system processes.
- Trained 20 engineers working on Tata Engineering Support Office project for McLaren in Warwick, U.K., in SAP PLM.

ACADEMIC PROJECTS (CMU)

Video Upscaling Using Deep Neural Network (DNN) – github.com/JD-Kulkarni/Video-Upscaling   February 2022 – May 2022

- Built a DNN to contextually interpolate low resolution input and produce high resolution output, maintaining visual fidelity.

Probabilistic Determination of Osteoporosis   September 2021 – December 2021

- Utilized computer vision and machine learning to analyze X-rays of bones and determine the presence of osteoporosis.

Fantasy Football Team Optimization – github.com/JD-Kulkarni/FF_Optimization   September 2021 – December 2021

- Built a solver to find optimal solution for a Fantasy Premier League (FPL) squad, which will provide user an advantage.

Meat Defroster – github.com/JD-Kulkarni/Meat_Defroster   February 2021 – May 2021

- Simulated a countertop meat defrosting device based on coupling of conduction, forced convection and phase change.

OTHER EXPERIENCE

Mechanical Engineering Department, CMU – github.com/JD-Kulkarni/Meshless_Solver   September 2021 – present

- Working on Physics-Informed Neural Network (PINN) code development for fluid flow prediction as *Research assistant* to Dr. Satbir Singh (including a Summer 2022 Fellowship). Currently developing PINNs to solve 2D advection-diffusion equation, with a goal of publishing research article and building a generalizable solver for the Navier Stokes equation.

Mechanical Engineering Department, CMU   September 2021 – December 2021

- Assisted Prof. McGaughey with feedback and grading as *Grading assistant* in "Numerical Methods for Engineering" course.

FanTeam Focus   April 2021 – August 2021

- Co-hosted weekly YouTube streams and published periodic articles about utilizing proprietary Expected Value Data Model to make Fantasy Football decisions as *Content creator* for a Daily Fantasy Sports (DFS) website.

AWARDS/CERTIFICATES

Certificate of Appreciation, Head of Operations at McLaren Automotive   January 2018
'Champion of the Month' award, Tata Technologies Limited   April 2017
Completed level 4 examination of **Tabla** (percussion instrument)   March 2016

SKILLS

Software	SAP PLM/BOBJ	MS Office	Python	TensorFlow/PyTorch	ANSYS Fluent
Languages	English (Fluent)	Marathi (Native)	Hindi (Native)	German (Elementary)	