

# Jaldhir Trivedi

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## EDUCATION

### Carnegie Mellon University

Pittsburgh, PA

*Master of Science in Mechanical Engineering (Concentration: Machine Learning) GPA: 4.0/4.0*

*May 2022*

*Master of Science in Engineering & Technology Innovation Management (ETIM) GPA: 3.95/4.0*

*Dec 2021*

*Relevant coursework:* Machine Learning, Deep Learning, ML with Large Datasets, Computer Vision, Business Intelligence & Data Mining with SAS, Robot Dynamics, Lean Product Development, Product Management

### Indian Institute of Technology Gandhinagar (IIT Gandhinagar)

Gandhinagar, India

*Bachelor of Technology in Mechanical Engineering (with Honours)*

*Aug 2018*

*& minor in Humanities & Social Sciences GPA: 8.1/10.0*

## EXPERIENCE

### LeanFM Technologies

Pittsburgh, PA

*Data Science Intern*

*May'21 – Aug'21*

- Developed RNN, LSTM & GRU for predictive modeling of air temperatures in HVAC systems with errors under 2°F
- Developed Ridge, Support Vector & Random Forest Regressor models for fault detection with 91% precision value

### Carnegie Mellon University

Pittsburgh, PA

*Graduate Teaching Assistant: 24787 Machine Learning & AI for Engineers (Grad level course)*

*Spring'21 - Fall'21*

- Undertook recitations for students' supplemental learning, organized Office Hours, designed and graded assignments

### Hindustan Petroleum Corporation Limited

Bhopal & Ahmedabad, India

*Officer- Sales & Technical Services, Lubricant Oils*

*Aug'18 – Sept'20*

- Undertook new Business Solicitation from OEMs & Core sector Industries through Seminars & Product Trials
- Handled Key account management for clients including Power, Electricity distribution, Ordnance & Railways
- Managed a portfolio that brought average annual turnover of \$3 Million and profit of \$500,000 for the corporation

## PROJECTS

### Model Pruning for a deep CNN while retaining near perfect accuracy

Pittsburgh, PA

*Course Instructor: Dr. Virginia Smith, Carnegie Mellon University*

*Sept'21 – Dec'21*

- Used Tensorflow to create magnitude based pruning for a CNN with 592k trainable parameters
- Achieved 97% model sparsity with the loss of accuracy restricted 2 points

### Biomechanics with Deep Learning & Inertial Measurement Units

Pittsburgh, PA

*Course Instructor: Dr. Amir Barati Farimani, Carnegie Mellon University*

*Feb'21 – May'21*

- Wrote ML Pipeline which preprocesses and trains LSTMs to predict Ground reaction forces using IMU data
- Achieved high accuracy of 0.08% body weight compared to 0.04% accuracy in costly techniques used erstwhile

### UX design for an online tool for automated R&D Tax credit calculations

Pittsburgh, PA

*Client: Ernst & Young, Course Instructor: Dr. Bob Monroe, Carnegie Mellon University*

*Feb'21 – May'21*

- Conceptualized product design & UX using Figma to develop clickable prototype of the online tool
- Studied market positioning of the product and adjusted its capabilities to appropriately cater to the niche segment

### Freeze casted Li-ion electrodes for enhanced Battery Performance

Clemson, SC

*Supervisor: Dr. Raj Bordia, Clemson University*

*May'17 – July'17*

- Created Li-ion electrode Freeze casted to various temperature to enable 100% higher porosity
- Undertook lab practices such as ball milling, Mo doping, freeze casting & freeze drying

## ACHIEVEMENTS

- **Rewards & Recognition** (Q4 FY 2018-19) for Outstanding Performance, Hindustan Petroleum Corporation
- **IIT Institute Funding** (consecutively in 2016, 2017) for research at ISCTE, Lisbon & Clemson University, SC
- **Dean's List** (Fall'16 & Fall'17) for Outstanding Academic Performance, IIT Gandhinagar

## TECHNICAL SKILLS

*Programming:* Python, R, C++, Java, MATLAB, SQL, HTML

*Tools:* AWS, SaaS Enterprise Miner, Tableau, Figma, Matlab, Simulink, Databricks, OpenSim, MS Excel

*Libraries:* Pytorch, TensorFlow, Apache Spark, Keras, OpenCV, OpenAI Gym, Ray tune, Matplotlib, pandas