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) GPA: 8.1/10.0 — *Aug 2018*

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 2°F error
- Developed Ridge, Support Vector & Random Forrest Regressor models for **fault detection** with 91% precision

Carnegie Mellon University — Pittsburgh,PA

Graduate Teaching Assistant: 24789- Deep Learning & 24787- Machine Learning — *Jan'21 - Present*

- 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 Development 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 pipeline in **Pytorch** trains LSTMs to predict Ground reaction forces using IMU data
- Used **Ray tune** to run ASHA scheduler scheme to **tune hyperparameters**
- 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 for the online tool
- Studied **market positioning** of the product and adjusted its capabilities to appropriately cater to the niche segment

Predicting pollution levels using Infrastructure Data of US counties — Pittsburgh, PA

Supervisor: Dr. Amir Barati Farimani, Carnegie Mellon University — *Sept'20 – Dec'20*

- Undertook **entity resolution**, **data preprocessing** and **univariate analysis** of features on the dataset
- Created **Classification** & **Regression** models using **scikit-learn** to get 70% accuracy and 0.1% error respectively

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, SaS Enterprise Miner, Tableau, Figma, Matlab, Simulink, Databricks, OpenSim, MS Excel
Libraries: Pytorch, TensorFlow, Apache Spark, Keras, OpenCV, OpenAI Gym, Ray tune, Matplotlib, pandas