

Jaldhir Trivedi

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EDUCATION

Carnegie Mellon University	Pittsburgh, PA
<i>Master of Science in Mechanical Engineering (Concentration: Machine Learning) GPA: 4.0/4.0</i>	<i>May 2022</i>
<i>Master of Science in Engineering & Technology Innovation Management (ETIM) GPA: 3.96/4.0</i>	<i>Dec 2021</i>
<i>Relevant coursework:</i> Machine Learning, Deep Learning, ML with Large Datasets, Computer Vision, Natural Language Processing, Product Management, Robot Dynamics	
Indian Institute of Technology Gandhinagar (IIT Gandhinagar)	Gandhinagar, India
<i>Bachelor of Technology in Mechanical Engineering (with Honours) GPA: 8.1/10.0</i>	<i>Aug 2018</i>

EXPERIENCE

Valted Seq	Gaithersburg, MD
<i>Data Scientist, Machine Learning</i>	<i>Jan'23 – Present</i>
<ul style="list-style-type: none">Created novel adapter alignment pipeline for fastq files using Numba that can leverage GPUThis method using Cuda programming brought down the alignment time to 1/10th of the other methodsUsed MLP Classifier to classify crosstalk in genome data to achieve .82 f1 score	
Amazon Inc.	Bellevue, WA
<i>Software Development Engineer</i>	<i>June'22 – Jan'23</i>
<ul style="list-style-type: none">Built RNN GRU quantile regressors to predict traffic data for newly onboarded games to pre provision resourcesLimit concurrency of Sagemaker and Athena jobs using Lambda State Machine jobs API callsWritten AWS Lambda functions written in Python and Javascript which establishes microservice business logicLeveraged CloudFormation written in Typescript to create dashboarding costs across AWS accounts	
LeanFM Technologies	Pittsburgh, PA
<i>Data Science Intern</i>	<i>May'21 – Aug'21</i>
<ul style="list-style-type: none">Developed RNN, LSTM & GRU for predictive modeling of air temperatures in HVAC systems with 2°F error	
Carnegie Mellon University	Pittsburgh, PA
<i>Graduate Teaching Assistant: 24789- Deep Learning & 24787- Machine Learning</i>	<i>Jan'21 – May'22</i>
<ul style="list-style-type: none">Undertook recitations for students' supplemental learning, organized Office Hours, designed and graded assignments	
Hindustan Petroleum Corporation Limited	Bhopal & Ahmedabad, India
<i>Officer- Sales & Technical Services, Lubricant Oils</i>	<i>Aug'18 – Sept'20</i>
<ul style="list-style-type: none">Managed a portfolio that brought average annual turnover of \$3 Million and profit of \$500,000 for the corporation	

PROJECTS

LaplaceNN: Temperature field prediction using CNN Unet architecture	Pittsburgh, PA
<i>Supervisor: Dr. Amir Barati Farimani, Carnegie Mellon University</i>	<i>Jan'22 – May'22</i>
<ul style="list-style-type: none">Used Laplace equation to generate training and test dataset to undertake data driven model trainingCreated Unet CNN architecture for a 32x32 cavity that yielded 0.5°C average error on held out dataset	
Question Answer Generation system for Wiki articles using a rule based workflow	Pittsburgh, PA
<i>Supervisor: Dr. Alan W. Black, Carnegie Mellon University</i>	<i>Jan'22 – May'22</i>
<ul style="list-style-type: none">NLP System that can crawl through a given article and frame 40 questions and independently answer themUsed docker to package the app into a container that runs python environment to run spaCy and NLTK	
Model Pruning for a deep CNN while retaining near perfect accuracy	Pittsburgh, PA
<i>Course Instructor: Dr. Virginia Smith, Carnegie Mellon University</i>	<i>Sept'21 – Dec'21</i>
<ul style="list-style-type: none">Used Tensorflow to create magnitude based pruning for a CNN with 592k trainable parametersAchieved 97% model sparsity with the loss of accuracy restricted 2 points	
Biomechanics with Deep Learning & Inertial Measurement Units	Pittsburgh, PA
<i>Course Instructor: Dr. Amir Barati Farimani, Carnegie Mellon University</i>	<i>Feb'21 – May'21</i>
<ul style="list-style-type: none">Wrote pipeline in Pytorch trains LSTMs to predict Ground reaction forces using IMU dataUsed Ray tune to run ASHA scheduler scheme to tune hyperparameters to get mean error of 0.08% body weight	

TECHNICAL SKILLS

Programming: Python, C++, JavaScript, TypeScript, MATLAB, SQL, CSS, HTML, Java
AWS: DynamoDB, S3, Sagemaker, Athena, Cloudformation, EC2, EBS, Lambda, Eventbridge, SNS, Glue
Tools: Docker, SaaS Enterprise Miner, Tableau, Figma, Databricks, NLTK, spaCy, Git, Confluence, Jira
Libraries: Pytorch, TensorFlow, Spark, Numba, Keras, OpenCV, OpenAI Gym, Ray tune, Matplotlib, pandas, SciPy