Vishhvak Srinivasan

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Education

Carnegie Mellon University - School of Computer Science — Pittsburgh, PA
Master of Science in Artificial Intelligence & Innovation — 05/2023
Coursework - Introduction to Deep Learning, Machine Learning (ML) in Production, ML with Large Datasets

Vellore Institute of Technology (VIT) — Chennai, India
Bachelor of Technology in Computer Science & Engineering | CGPA: 8.8/10 — 06/2020

Skills

Programming Languages - Python, Java, C++, C, SQL, JavaScript
Libraries & Frameworks - PyTorch, Django, Sklearn, Tensorflow, Numpy, Pandas, Matplotlib, nltk, spaCy, PySpark
Tools - Microsoft Office, Jupyter Notebook, Git, PostgreSQL, AzureML, Docker

Experience

LAM Research — Portland, Oregon
Machine Learning Intern — 05/2022-Present
- Film growth detection on wafer deposition tools, using deep learning image detection and segmentation models with manually captured and annotated video data using CVAT.
- Temperature detection and gradient mapping of structural elements - domes, coils in plasma deposition tool using infrared images, via calibrating a thermal camera for temperature and curvature.

Carnegie Mellon University - 11785 - Introduction to Deep Learning — Pittsburgh, PA
Graduate Teaching Assistant — 08/2022-12/2022
- Working on restructuring core HW writeups, code and recitations covering concepts including Attention, Sequence-to-Sequence models, Language Models, Recurrent Neural Networks, Convolution Neural Networks, Multi-layer perceptrons, Beam Search, etc.

Ford Motor Company — Chennai, India
Machine Learning Intern — 05/2019-07/2019
- Developed a predictive analytics module driven by machine learning regression models built on sklearn to predict profit margins of a subset of 5 vehicles based on monthly financial data from previous 5 years, achieving an R2 score of 0.3.
- Performed data imputation techniques such as SMOTE to address lack of sufficient data for training.
- Co-authored a technical research paper on the module which was published internally.

Projects

Maneuver ID Detection
- Worked with a team of 4 students on the Maneuver identification challenge by MIT and AI accelerator to develop a solution to classify good and bad maneuver data recorded using a flight simulator.
- Built and tested FCN, BCNN and ResNet for time-series classification.
- Used augmentation methods including random gaussian noise and rotations and weighted cross entropy loss to account for the imbalanced dataset.
- Improved upon the baseline CNN approach's recall by 12.5%, with only a 0.4% decrease in accuracy.

Distributed Attendance System
- Spearheaded a team of 5 to create a robust, fast, attendance system based on a hybrid architecture consisting of a full stack web app, mobile app, face recognition using AI to replace manual practices.
- Responsible for developing and REST APIs via Django to enable fast client-server interactions, along with design of encrypted QR code-based message passing and dockerizing the app for seamless deployment.
- Achieved a mean speed of 7.5 seconds to post attendance for 65 students, boasting an improvement of 95% in efficiency over existing manual methods used by faculty.