Nilesh Sonawane

Machine Learning Engineer
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EXPERIENCE

Quantiphi Analitics, Mumbai 2019[July] - 2020[Feb]

Machine Learning Operations Engineer - Recently worked as a part of Video intelligence Team in Athena's Owl, a Media Based AI product. Responsible for generating models and deployment on GCP for new AI features in the Product. Contributed in making drag and drop platform for AI in Media. *Worked in*:

- **Face Recognition using Few shot learning** - The main objective was to recognize faces in a video. Created face recognition Pipelines for training and inferencing. Trained using **Siamese** network, deployed using GCP's kubeflow.
  Duration - 3 months
- **Camera Angle Detection** - Classification of Images Based on different types of camera shots on basis of **Monocular Depth** of Image using **KITTI** and **NYU Depth** Dataset.
  Duration - 2 months
- **Kubeflow Pipeline for Continuous Training & Benchmarking** - Created First Generic version of Benchmarking setup to measure the performance of various features using **Python OOPS**. Using **Docker** and kubeflow, an Integrated pipeline was made for training our models on more data and simultaneously benchmark on fixed dataset, generating reports containing comparision of new vs old Results.
  Duration - 2 months
- All the work was done on ***GCP***. Also contributed in other features such as Emotion Detection, Object Detection, etc.

PROJECTS

***Dog Breed Classifier*, Kaggle Problem** -
A multi-class image classification problem solved using PyTorch. The Aim was to build an ML workflow (consisting of 3 models) that could be used within a web app to process real-world, user-supplied images in the following ways:- Human face detector, Dog detector, and Dog breed Classifier. [***Blog link***].

***Sentiment Analysis using AWS Sagemaker*, Udacity Project**-
Created an end-to-end ML pipeline and deployed on AWS using its REST API and Lambda services. Trained an LSTM model for sentiment analysis on IMDB movie reviews. Created a web app that is connected to the deployed models endpoint.

***AirBnB Seattle Data Analysis*, Kaggle problem**-
A Data analysis and insight generation on AirBnB's Seattle city data for the year 2016-17. Analysis was done using the CRISP-DM process. Data Insights were generated using visualizations. Wrote a blog which featured on *Towards Data Science* [***Blog link***].

***Plagiarism Detection using AWS Sagemaker*, Udacity** -
Created an end-to-end ML pipeline and deployed on AWS. Built a plagiarism detector that examines a text file and performs binary classification, labeling that file as either plagiarized or not, depending on its similarity with the provided source text.

***Upvotes Prediction (Enigma Codefest Challenge)*, Analytics Vidya** - Predicting the number of upvotes for a query. Used various regression techniques such as Decision Tree, AdaBoost Regressor to solve this problem.

ACADEMIC PROFILE

UDACITY, **Nanodegree Program** .....2020[Mar] - 2020[May]
Machine Learning Engineer Nanodegree - ML workflows, Hands on projects using AWS Sagemaker, S3, and other AWS services.

GreyAtom, **Mumbai** ..... 2018[Dec] - 2019[Sept]
Data Science Masters Program with Deep Learning - Hands on knowledge of Machine Learning Algorithms, Deep Learning, EDA, Data Visualization, participated in 2 Hackathons and Capstone.

VESIT, University of Mumbai .....2015[June] - 2019[May]
BE Electronics and Telecommunication -
CGPA - 8.11 || Learned and worked around controllers and IOT.

SKILLS

Python - Numpy, pandas, sklearn, scipy, matplotlib, seaborn, beautifulsoup, Flask, keras, tensorflow, pytorch, docker, mxnet, NN, CNN, R-CNN, RNN, json, yaml, OOPS

Cloud, Deployment, ML-ops, others - *Google Cloud Platform*, docker, container orchestration, kubeflow, ML-flow, kubernetes, jenkins, GIT, REST API, Conda, VSCode, Jupyter, MySQL, Tableau

Data Science Skills - Machine Learning, Deep Learning, Computer Vision, Exploratory Data Analysis, NLP, Data Visualization, Data Wrangling, Insights Generation, Statistics

CERTIFICATIONS & COURSES

Coursera, ***Machine Learning*** - by **STANFORD University, [Andrew Ng]** - Understanding & application of ML Algorithms.

Coursera, ***Deep Learning Specialization*** - by **deeplearning.ai, [Andrew Ng]** - Understanding and Application of various Deep Learning techniques. Projects using DNN, CNN, RNN, LSTM, LRU for various tasks like image recognition, object detection, NLP, etc.

CS231n: ***Convolutional Neural Networks for Visual Recognition*** - **STANFORD University** - Basics of Deep Leaning, NN, CNN, RNN for Visual Recognition with Python and Numpy. Theory covered. Couse covered by Andrej Karapathy, Fei Fei Li and Justin Johnson

NPTEL, ***Data Structure and Analysis using Python*, IIT Madras** - Basics of python programming, algorithms, data structure, scored 70%

Udemy, ***Python 3: Deep Dive (4 parts)*** - Intermediate to Advanced Level of Python 3. Deep dived in Python. Extensive knowledge gained. Became more comfortable/proficient with Python after this course.

Coursera, ***Advanced Machine Learning on Google Cloud Platform*** - by **Google AI** - Machine Learning on GCP using its ML Engine.

Udemy, ***Machine Learning A-Z: Hands on Python in Data Science*** - This course gave extensive knowledge about Machine Learning and helped me learning complex theory, algorithms and coding libraries in a simple pythonic way, mathematics behind ML algorithms

Pursuing [Udemy]- REST APIs with Flask , Complete Kubernetes Tutorial by School of Devops, Tableau A-Z, etc. through projects.