Nimesh Kumar

DATA SCIENTIST / SOFTWARE ENGINEER

Details

+91 9555546145
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Links

kumarnimesh.github.io
www.linkedin.com/in/nonlinearnimesh
https://github.com/NonlinearNimesh
Coursera DL Specialization (7TBTPSTUJ4RZ))
Coursera AI for Medicine (UFMVFFMXL7B7)

Skills

Python
Machine Learning
Deep Learning
C
JavaScript
HTML/CSS
Computer Vision
Tensorflow
Numpy
Pandas
Sciket-Learn
Keras
Pydicom
Visualization (Matplotlib/Seaborn)
Transformers
SQL Databases (Sqlite/Mysql/Postgres)
Data Science Pipeline

Employment History

Software Engineer, Carpl.ai, New Delhi

DECEMBER 2021 — PRESENT

- Utilized python fastapi library to implement scheduler based four API that comes under Middlelayer of carpl.ai workflow, Additionally performed unit testing of same.
- Utilized python pydicom package to create a labelled dataset by converting 13500 mammogram dicom files into generalised image format and implement deep learning based algorithm for classifying mammogram view position i.e. rcc, lcc, lmlo, rmlo with 98% accuracy and 95% AUC dismissing the chance of failing when view information is not present in dicom tags while predicting breast cancer. Additionally performed unit testing and build a scheduler based service using fastapi and MySQL.
- Utilized python's pydicom, dcm4che and pynetdicom3 to implement **Carpl Router** that can be installed in any hospital/ Imaging center and this router will fetch data from the PACS and sent it to carpl where it will get processed using multiple available algorithms and the results will be sent back to the PACS / Doctor's Workstation.
- Built a full fledged Alert based Monitoring system using Mysql which will store every data that is on caprl , visualized it using PowerBI and Notifying using python slack and smtp module helping Carpl to identify the failed cases along with the reason and the stage where it fails in real time

Machine Learning Intern, Carpl.ai, New Delhi

AUGUST 2022 — OCTOBER 2022

- Utilized python pydicom package to create a labelled dataset by converting 5000 Computed Tomography dicom files into generalised image format and implement deep learning based algorithm for detecting whether a person has a Tuberculosis or not with an Accuracy of 95% and AUC 89%. Additionally performed unit testing, helping organization to get a approximately 3TB of radiology data from one of reputed Tamil Nadu Hospital.
- Utilized python to implement EAST and reduced final model size from 385Mb to 16Mb using several model size reduction technique, converted the reduced keras model to tensorlow.js compatible model for detecting text in an image in the browser itself and avoid any kind of data leakage from the sever

Education

Doctor of Philosphy, Indiana Institute of Technology (Dropped Out), Patna

AUGUST 2020 — JANUARY 2022

- Cumulative GPA: 8.5/10
- Proposed an encoder- decoder based model combined with attention mechanism and Bert to classify Hate/Not Hate tweet with 83.37 accuracy and normalise the hate tweets and preserve their context with blue score of 54.17%
- *Prepared a codemix dataset by scrapping multimodal data from twitter, Instagram and reddit using some specific hate keywords for hate speech classification in memes and proposed model which outperformed several baseline models with accuracy and AUC of 78% and 83%.*
- *Web Application :* Utilized python based flask api with html, CSS and JavaScript to built a web application where the above mentioned models are integrated

Master of Technology, Jaypee Institute of Information Technology, Noida

AUGUST 2018 — JUNE 2020

- Cumulative GPA: 8.5/10
- *Virtually simulated a self driving car using Udacity's self driving car simulator using Nvidia's Convolutional network. Also, Performed the detection of lane using computer vision and traffic road symbols using neural networks.*
- *Utilized various segmentation techniques to detected the change in the remote sensing image of Padma River course and measure the change using by Structural similarity measure on every slices of the image .*