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Career Summary

- Currently pursuing my career as a Senior Software Engineer with core expertise in Deep Learning, Machine Learning, Python and C++.
- My work has revolved around architecting ML-driven solutions in products/platforms and getting them live into production.
- Experience in various ML algorithms(KNN,K-means,Naive Bayes,LR,SVM,DT,Random Forest,GBDT etc.)
- Experience in building Deep Learning models using components such as LSTM/RNN, CNN, Transformer, Bert, Auto-encoders, Memory Networks, etc.
- Well versed with platforms such as Docker, Kubernetes. Experience in using GCP/AWS when there's a need for high computing power.

Experience

- **Imagination Technologies** Hyderabad, India
  Senior Software Engineer [Vision and AI] *Sep 2021 - Present*
  - **NC-SDK**
    - Working on building SDK to support neural networks to run on Imagination's GPU and Neural network accelerator.
    - It convert models from all popular frameworks like tensorflow, pytorch, caffe, onnx etc., and creates optimized binaries for custom hardware.
    - Implemented support for LSTM/RNN in NCSDK for Networks present in various frameworks.
    - Developed graph transforms for various operations and operators in RelayIR(TVM).
    - Contributed in implementation of quantization(static/dynamic quantization, QAT) support for various frameworks.
- **Xpanxion** Pune, India
  Data Scientist *Jan 2020 - Aug 2021*
  - **Anthem - Symphony**
    - Extracting information from the various medical documents with help of AI/ML.
    - Document Classification and candidate extraction from classified documents to extract benefit, rates, drug details and plans details. Using libraries like Fonduer, Tesseract, OpenCV.
  - **Digital Access Hub**
    - Building various reusable AI/ML components as a part of Innovation team
    - Implemented Recommendation system using content-based/collaborative algorithms.
    - Developed NLP components such as NER, sequence translation ,QnA from the given knowledge base.
    - Worked on Computer Vision use cases like Object localization and detection, Image segmentation and Gesture recognition.
- **Siemens R&D** Pune, India
  Product Development Engineer *Dec 2018 - Dec 2019*
  - **Automation Designer(Python/C++)**
    - Developed an application to design and test a manufacturing sequence.
    - Implementation of use-cases and bug fixing to support the planned Nx releases.
- **TCS** Pune, India
  Software Developer *Dec 2015 - Nov 2018*
  - **Application Developer(Python)**
    - Developed an application for client NCRA for Monitoring and Controlling of antennas. Detecting and debugging the issue reported in an aaplication. Solved the problem of false triggering of alarm's with the help of machine learning.
    - Worked in Production Management for client Morgan Stanley.

Projects

- **Deep Learning**
  - **Neural Machine Translation using Attention mechanism (NLP)** Task is to implement Machine Translator. Attention mechanism was used to deal with longer sequences. After data cleaning and processing, output labels were padded with start and end tokens before feeding to n/w.
  - **Nueral Question Answering(NLP + Attention + Machine Reading Coprehension)** Objective is to find correct answer for given question and context pair. Implemented Standford Attentive Reader. SQUAD v1 dataset was used for this project. Various binary and NLP features were used to get the best results. Compared the final results with fine tuned BERT model.
- **Machine Learning**
  - **Netflix Movie Recommendation System (Collaborative based recommendation)** Objective was for the given movie and user predict the rating given by him/her to the movie. The dataset was obtained from kaggle. Matrix factorization was used to get similarity matrices. Tried and tested various ML models to get minimum Root Mean Square.
  - **Stack Overflow Tag Prediction** Objective is to predict as many as tags possible with high Precision and Recall. The dataset was obtained from kaggle. The given problem is **multi-label classification problem**. The dataset contains features such as Id, Title, Body and Tags. Data preprocessing and cleaning was done to remove html tags and hyperlinks. Micro-Averaged F1-Score was used as performance metric as mentioned on Kaggle.

Technical Skills

- **Languages:** Python, C++, NodeJs
- **Database:** MySql,MongoDB
- **ML/DL Toolkit:** Keras, scikit-learn , tensorflow, pytorch, Onnx
- **Others:** Docker, Kubernetes, GitHub, svn, Jira, Perforce, Jenkins, Service Now

Education

- **B.Tech** in Electronics and Telecommunication from SGGSIE&T, Nanded with **CGPA 7.7** (2011 - 2015)
- Class Xll (HSC), form Maharashtra State Board of Education with **83.33%** (2009 - 2011)
- Class X (SSC), form Maharashtra State Board of Education with **90.92%** (2008 - 2009)