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Career Summary

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

Experience

- **Imagination Technologies** Pune, India
  Senior Software Engineer [Vision and AI] *Sep. 2021 - Present*
  - **NC-SDK(Python/C++/DL/TVM/CV)**
    - Working on building SDK to support neural networks to run on Imagination's GPU and NNA (Neural network accelerator) with the help of TVM.
    - Implemented support for LSTM/RNN in Imagination NCSDK for Networks present in PyTorch,Tensorflow,Onnx.
    - Developed graph transforms for various operations and operators in RelayIR(TVM).
    - Contributed in development of quantization tools(static/dynamic quantization, QAT) for various frameworks.
- **Xpanxion** Pune, India
  Data Scientist *Jan. 2020 - Present*
  - **Anthem - Symphony(Python/DL/ML/NLP)**
    - 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(Python/DL/ML)**
    - Building various reusable AI/ML components as a part of Innovation team
    - Recommendation system using the content-based/collaborative algorithm
    - NLP components such as NER, QnA from knowledge base and sequence translation.
    - Worked on Computer Vision use cases like Object localization and detection, Image segmentation and Gesture recognition.
    - CCA (Canonical Correlation Analysis), Factor analysis to find out the relation between the features and then use the ML algorithm to find out the insights.
- **Siemens R&D** Pune, India
  Product Development Engineer *Dec. 2018 - Dec 2019*
  - **Automation Designer(Python/ML/C++)**
    - Developing an application for designing of manufacturing sequence.
    - Debugging and fixing the issue in the existing code.
- **TCS** Pune, India
  Software Developer *Dec 2015 - Nov 2018*
  - **Application Developer(Python)**
    - Developed an application for client NCRA for Monitoring and Controlling.
    - Monitoring and debugging the issue and modifying the GUI as per requirements.
    - Build a model for the false triggering of alarm and anomaly detection.

Projects

- **Deep Learning**
  - **Neural Machine Translation using Attention mechanism (NLP)** Task is to implement Machine Translator.Attention was used to deal with longer sequences. Data cleaning and 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++, R(basics)
- **Database:** MySql,MongoDB
- **Data Analysis:** Pandas, Numpy, Matplotlib, Seaborn, openCV
- **ML/DL Toolkit:** Keras, scikit-learn , tensorflow, pytorch
- **Others:** GitHub, svn, Jira, Jenkins, Service Now etc.,

Certifications/Internship

- Applied Machine Learning course at Applied AI. (Jan 2018 to May 2019)
- Completed Standford Statistical Learning (Self-Paced) course.
- Completed Deep Learning Specialization course from Coursera
- Internship at IARE, Aurangabad on Industrial automation. (May 2014 - Jun 2014)

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)