JOEL TRULIN

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Professional Summary

Results-driven Machine Learning and Computer Vision Engineer over 3 years of experience in Data Exploration, Image Processing, Object Detection, Segmentation, Classification & Regression, Anomaly Detection, GAN, VAE, Speech to Text, Multimodel, Statistical modeling, DVC, MLflow. Proficient in developing scalable solutions using AWS S3, TensorFlow, PyTorch, OpenCV, Pandas, Sklearn and Matplotlib. Proven success in optimizing models for mobile deployment and improving production efficiency using TFLite

Work Experience

CapeStart

2023 July - 2024 June

Associate Software Engineer (Machine Learning)

- Designed a custom vision model for frame selection from camera, achieving 95% accuracy in detecting teeth aligners on a challenging dataset.
- Worked on transformer based multimodel like audio, text, vision capabilities.
- PICOS elements & Entity Extraction using spacy & GPT models in health care.
- Intelligent in selecting the optimal server for model training and inference with regard to cost efficiency.

Easy Synopsis

2020 November - 2022 December

Python Programmer (Machine Learning)

- Comprehensive experience in the entire Data Science lifecycle, from raw data cleaning and advanced data visualization and the development of cutting-edge machine learning models.
- Analyzing data and building statistical models using Neural Networks to solve specific business problems.
- Performing Classification, Regression, Time-Series Forecasting, Anomaly detection on Tabular, Textual, Image, Audio and Video data.

Education

Vins Christian College of Engineering

2019

BE Electronics & Communication

First class 7.05/10

Certifications

Deep Learning Specialization

Organization: DeepLearning.AI

Courses with Grade:

- Neural Networks and Deep Learning (98.91%)
- Hyperparameter Tuning, Regularization and Optimization (97.25%)
- Structuring Machine Learning Projects (86.66%)
- Convolutional Neural Networks (97.25%)
- Sequence Models (93.97%)

Credential url:
https://www.coursera.org/account/accomplishments/verify/481KQ3W82CDW
https://www.coursera.org/account/accomplishments/verify/46YK7RLR5X80
https://www.coursera.org/account/accomplishments/records/VMCASYAVPHEO
https://www.coursera.org/account/accomplishments/records/TVYZK73E92Z0
https://www.coursera.org/account/accomplishments/records/LC6F6XLH2HQV

Projects

MyByte

- Designed a custom frame picker model with 95% of accuracy that selects the optimal frame via camera.
- Compressed the Vision model to 60K from 24M parameter.
- Data Versioning is done using DVC tool.
- Experiment Tracking & Model Registry is done using MLFlow
- Performed Hyper parameter tuning, Quantization, Pruning, Knowledge Distillation.

Tech Stack Used: *Python, Opencv, Tensorflow, Keras, MLflow, DVC, Ultralytics.*

Janssen

- Used OpenAI prompts to extract Entity & PICOS elements with Include/Exclude criteria.
- Applied Chain of Thoughts, Tree of Thoughts, RAG, Semantic Search, Prompt Versioning.

Tech Stack Used: *Langchain*

Achievements

- Achieved memory reduction by 86.6%, from 1.5 GB to 200 KB in Edge-Device deployment.
- Increased inference upto 200 fps which decreased production time by 400%.

Skills

- Python | Numpy | Pandas | Matplotlib | Tensorflow | PyTorch | Sklearn | PIL | OpenCV
- Intelligent Data Preprocessing | Feature Engineering | Data Version Control (DVC) | MLflow | ClearML | MLOps
- Graph Neural Networks | Transformers | Quantum Neural Networks | Reinforcement Learning
- Image Captioning | Semantic & Instance segmentation | Pose Estimation
- Fine tune model hyper-parameter | Quantization | Pruning | Knowledge Distillation