Richard Morre

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Senior Machine Learning Engineer with 8+ years of experience in application design, development, testing, and deployment. Led a technical team of 5 members at *Curatat* and responsible for implementing CI/CD for data engineering and machine learning platform. Completed more than 10 products and made 20M+ $ for several employers. Abilities to identify, understand, and translate program requirements into sustainable, advanced technical solutions through Python, C#, C++, JavaScript, and other programs for continuous improvement of AI technologies.

Work Experience

Team Leader/Senior Machine Learning Engineer | Curata *Botson,MS,US*

2021.1 – 2022.12

- Optimized compiler and accelerate its speed to 3.8 times using AI (fully-Bayesian generative network).
- Led a team of 5 junior machine learning engineers in building a model, which could detect 80 different classes in satellite images (xview1 dataset) using Pytorch and Yolov8
- Established brain injury detection system using Python, Docker, OpenCV, AWS Amplify, S3, Lambda, SageMaker and IoT. Also usded SVM regression algorithm for forecasting the position of pupils.
- Developed a custom fire detection model with **92% accuracy**, which was trained on an open-source dataset using a Resnet with a size constraint.
- Developed and trained an unsupervised model which takes free text as input, applies the LDA algorithm to it, and returns the topics contained in that text using Python/Gensim
- Developed a model using Python/Deepspeech to take speech audio along with some words and to return the timestamp of those words in the audio.

Machine Learning Engineer | Fronteo,US, *New York, US*

2019.1 – 2020.11

- Architecting our Customer Activity Tracking System that collected, computed, and served user intent signals for web personalization. This system powered personalization features that increased our checkout conversion rate by 10%. This system was developed using Python, Terraform, AWS Lambda, AWS DynamoDB, and AWS API Gateway.
- Building a lead-to-contract algorithm that used web interaction data to identify high-intent customers. The sales strategies powered by this algorithm generated an additional 1000 deposits per year. The algorithm was built using Python, Fast API, Scikit-Learn, and AWS DynamoDB.
- Devised a face mask detection with real time videos using Python, OpenCV,Yolov2 with 98% accuracy.
- Established the Brain Injury Detection System using Python, Docker, OpenCV, AWS Amplify, AWS Lambda, AWS S3.

Full Stack Engineer /Junior Machine Learning Engineer | MEGVII *Beijing, China*

2014.10 – 2018.12

- Authored two patents on a chatbot for psychological support and emotion analysis of text, respectively (Registered).
- Improved web performance (faster load times, smaller bundle sizes). Established reusable & responsive React chart components using D3.js that support interactive visualizations of data and analysis.
- Built React front-end and Node.js Backend admin dashboard for complex data table visualization with user-friendly searching features.
- Built React front-end and Node.js Backend admin dashboard for complex data table visualization with user-friendly searching features.

Education

Master's Degree in Mathematics and Computer Science | Boston University

2010.5 – 2014.5

- GPA:3.7/4.00
- Concentrations: AI | ML| DL | Applied mathematics | Algorithms | RESTful API

Skills

- Machine Learning
- Statistics
- Optimization
- Computer Vision
- MLOps
- Compiler
- NLP
- OpenCV
- Python (Numpy, Pandas, Scikit-learn)
- Scala
- Java
- Tensorflow,PyTorch,Keras
- Big Data(Hadoop,Spark,Hive)
- SQL(MySQL,PostgreSQL,Oracle)
- NoSQL(MongoDB,DynomoDB)
- Backend Framework(Flask,Django)
- Data Structure & Algorithm
- CI/CD
- Jenkins,Docker
- Git
- GCP (Kubernetes, Vertex AI)
- AWS(S3,EC2,SageMaker,Amplify,Kinesis, Airflow)
- Agile Methodologies
- Microsoft Azure
- Apache Kafka, Apache Beam
- C/C++
- Javascript
- Frontend Framework(React.js,Angular.js)
- Pruning
- Chip Architecture
- Quantization

Language

- English (Native)
- Chinese (Native)[mandarin]