CHUKWUEMEKA EZUMEZU

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SUMMARY

Results-oriented Lead Machine Learning Engineer with over 5 years of experience developing and deploying machine learning models, data analysis, and software development. Proficient in cloud computing, data science, MLOps, and algorithm development. Skilled in Python, SQL, and various machine learning frameworks. Proven track record in enhancing business strategies through data-driven insights. Seeking a challenging role in a dynamic, mission-driven environment.

WORK EXPERIENCE

NUROVANT AI   **Dallas, Texas**

AI/ML Engineer   *03/2024 - Present*

- Utilized ASR techniques with the NVIDIA NeMo model to conduct Speaker-Diarization tasks, transcribing audio files into speaker segments and timestamps.
- Developed and integrated the Teacher Speak Rate feature in Flask, analyzing diarized transcripts to optimize educators' speaking time and enhance student engagement during lectures.
- Implemented Questions Tracker with LLM to monitor and tally classroom questions, fostering educational dialogue.
- Built GPTZero-powered content classifier feature to differentiate human and AI text, aiding teachers in identifying academic dishonesty.
- Created ML-driven document proofreader feature to improve grammar, spelling, and punctuation, enhancing document quality.

CHEKKIT TECHNOLOGIES CORP.   **Ikoyi, Lagos**

Lead Machine Learning Engineer   *09/2022 – 03/2024*

1. **ChekIntel - Real-time Business Intelligence Dashboard**
   - Developed and deployed a ChekIntel web app (Flask, Python Plotly, scikit-learn, Docker Container, Microsoft Azure, App Service, CI/CD pipelines with GitHub Action).
   - The app seamlessly retrieved and analyzed client data from the SQL database, enabling real-time insights and informed data-driven decisions.
   - It also empowers clients to upload surveys or sales data (sales data forecast future sales with past sales data), automating end-to-end analysis, which results in a 10% profit improvement.
2. **ChekInspect - Computer Vision Product Line Inspection**
   - Researched and developed cutting-edge computer vision solutions for product inspection.
   - Designed a robust computer vision model for precise product identification and defect detection.
   - Innovated AI-powered system for scrutinizing product sticker labels, ensuring product authenticity and quality assurance.
3. **Machine Learning Model for User Survey Data**
   - Predictive analysis to infer the effectiveness of medications (e.g. Glucophage) given features.
   - Developed and deployed a model for categorizing user survey data based on behavioral analysis.
   - Generated actionable insights through an interactive dashboard, contributing to a 30% boost in data-driven decision-making.
   - Utilized clustering techniques for improved data organization and analysis.
4. **Other Contributions**
   - Customer segmentation to enable our clients to understand and render tailored service to different classes of clients.

- Collected and processed data from various sources for analysis using Python, NumPy, Pandas, and more.
- Created dynamic data dashboards using Tableau for on-demand data presentation.

DIGIPLEX TECHNOLOGIES (FREELANCER)   **Lagos Island, Lagos**
AI/ML Engineer | Web and Mobile App Developer   *03/2021 - 02/2024*
- Developed a Retrieval Augmented Generation (RAG) powered PDF and/or website links chatbot app using LangChain, ChatGPT API, Huggingface language models, and Python Flask. Also on a mobile app using Flutter.
- Developed a mobile breaking news app with over 1000 users on the Play Store and is generating revenues.
- Helped small businesses increase their sales by improving their online presence through building interactive and eCommerce websites, social media marketing, etc.

SKILLS

- **MLOps**: FastAPI, Modelling, Deployment and Monitoring, CI/CD pipelines (GitHub Action), Docker Container, App service, Synthetic Data Generation, TensorFlow Extended (TFX), Responsible AI.
- **Cloud and Web:** GCP (AutoML, BigQuery, Vertex AI, Gen AI), AWS (Sagemaker), Azure, Flask, Streamlit.
- **Data Scientist:** Python, NumPy, Pandas, Scikit-learn, ETL, NLP, Experimental Design, Recommendation Systems, Linear Algebra.
- **Machine Learning Engineer:** Scikit-learn, Clustering, Dimensionality Reduction (PCA), Data Processing, Feature Extraction, Data visualization.
- **Data Analyst:** Descriptive and Inferential Statistics, Data Wrangling, Exploratory Data Analysis, Data Visualization.
- **Data Structures and Algorithms:** Arrays, Linked Lists, Stacks, Queues, Recursion, Tree, Sorting, Graph Algorithms.
- **Business Analytics and Predictive Analytics for Business:** Excel, SQL, Tableau, Alteryx Analytics Software.
- **Computer Vision:** PyTorch, TensorFlow, Keras, C++, CNN, RNN, OpenCV.
- **NLP:** Feature extraction, Deep Learning Attention, Topic Modeling, Sentiment Analysis.
- **Generative AI:** Retrieval Augmented Generation (RAG), LangChain, Large Language Models (LLM), Prompt Engineering, Attention Mechanism.

EDUCATION

- Bachelor of Science in Computer Science, National Open University of Nigeria (NOUN), January 2014 - July 2019

CERTIFICATIONS

- AI Product Manager Nanodegree, Udacity, March 2021 - August 2021
- Intel® Edge AI for IoT Developers Nanodegree, Udacity, March 2020 - July 2020
- Deep Learning Nanodegree, Udacity, March 2020 - July 2020
- Machine Learning Engineer Nanodegree, Udacity, November 2019 - February 2020

VOLUNTEER EXPERIENCE

OMDENA
Machine Learning Engineer   *07/2020 – 10/2020*
- Contributed to a project focused on preventing malaria infections through topography and satellite image analysis.
- Developed an algorithm for identifying stagnant water bodies, preventing mosquito breeding.