EDEKIN MICHAEL IMOUKWEDE

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Result-oriented Generative AI Agentic Expert specialized with 5 years of full-time working experience in AI/ML, NLP, NLU, and recommendation systems. I have expertise in engineering production-level ML solutions.

SKILLS

- Python, SQL, Bash
- Machine learning, Deep learning, Statistics, Data Analysis, Data Visualization, Algorithms, and Data Structure, Computer Vision, NLP, NLU, NLG, LLM, Big Data, Data Engineering, MLops and ML system design, Zapier automation
- Spacy, NLTK, Flair, HuggingFace, Spark, HDFS, Hive, TensorFlow, Pytorch, SQL, NoSQL, Flask, Django, FastAPI, ReactJs, AWS, GCP, Git, Docker, MLflow, Kubernetes, Dialogflow, Kafka, CI/CD, Azure, Rasa
- Leadership, Ownership, Innovation, Public Speaking, Mentoring

EXPERIENCE

GritinAI **Edo State, NG**
Head of Operations & Technical Lead (Generative AI & Cloud) *Apr 2024 - **Present***

- **Building enterprise agents** - function calling, RAG, memory modeling, code interpreter, reflection, planning, reasoning and multi-agent.
- **Consultancy:** Worked with Horizontal IOU to build AI capabilities for multiple domains (Government, healthcare, Automobile, Insurance.)
- **Big Win:** Multiple POC's for clients ended up getting converted to a Full-fledged Data Science Project.
- Currently working on different AI/ML and Gen AI Projects using Azure Cloud.

Assistant Technical Lead (Generative AI) *Nov 2023 – Apr 2024*

- Built spark data pipeline on GCP Dataproc clusters to process ~ 2 billion JSON records to train a sentence embedding using transformers model, Pytorch and NLTK on 4 million query-product pairs.
- Created a pipeline to retrieve ~ 2 million product features from multiple big query tables.
- Utilized Hadoop, Yarn, and HDFS to construct effective ETL pipelines for data processing and analysis.
- Engineered a recommendation system using sentence embedding and the BM25 method, which increased clicks and purchases by 10% on offline evaluation.
- Built a chatbot with RAG and GPT-2 Integration been used by over 10,000 users in Africa.

Skyeyez **Texas, US**
Senior AI/ML Engineer (Computer Vision, AI-Agents & Generative AI) *Aug 2024 – **Present***

- Led end-to-end development of a computer vision system, from data collection (via CCTV setup) and annotation (using Roboflow and CVAT) to deployment, including full documentation and team leadership (Frontend Engineers, UI/UX Designer).
- Developed and fine-tuned models for object and color detection—YOLOv8 (M variant) on 144,000+ images for real-time accuracy, and VGG-16 achieving 96% precision in color identification.
- Integrated advanced capabilities, including image-to-text summarization for video frames and Apache Kafka for real-time streaming, enhancing both system intelligence and scalability.
- Optimized performance and cost through serverless GPU processing with Runpod, rigorous model testing across YOLOv8 variants, and real-world application integration for scalable computer vision deployment.

SourceIQ (formarly TalkDEI) **California, US**
Lead AI/ML Engineer (Recommendation System & Generative AI) *Aug 2023 – Apr 2024*

- Developed a recommendation system using sentence embeddings and Retrieval-Augmented Generation (RAG) techniques. Utilized Azure Cloud for scalable data storage and deployment, and leveraged Large Language Models (LLMs) such as GPT-3 or similar for generating contextually relevant recommendations.

- Built an analytics platform utilizing Python and SQL to enable real-time tracking and analysis of diversity procurement efforts. Utilized advanced visualization libraries (D3.js, Plotly) to build dynamic dashboards and reporting tools.
- Built an AI driven chatbot, utilizing TensorFlow and Spacy libraries for NLP. Integrated Transformer-based models such as BERT and GPT-3 for contextual understanding and dialogue generation. Deployed Rasa for conversational flow management and dialogue state tracking. Used Apache Kafka for real-time data streaming and communication.
- Implemented GitLab CI/CD pipelines and workflows for Docker builds, unit testing, metrics reporting, and merge conflict checks to support MLOps and ensure codebase stability for the team.

Artificial Neurons AI   **Mumbai, IN**
Data Scientist (Recommendation System & CV)   *Mar 2022 – Dec 2022*
- Utilize transformer model to design and build a healthcare recommendation algorithm using sentence embeddings and RAG, normalizing complex services for microservices model serving and KNN query searching. Analyze patient data and discern clusters of patients with analogous health profiles.
- Assisting primary & secondary tracing of medical images with Computer Vision. Using 2M+ labeled datasets to train the models, enabling the identification of specific features or patterns in images for highly accurate and detailed insights.
- Developed comprehensive technical documentation for all research experiments, including detailed results, analysis of current shortcomings, and system architecture diagrams for deployment services and APIs. Effectively communicated technical concepts to upper management and VPs to provide clear and concise insight into the performance and limitations of the models.

ApptJobs   **Lagos State, NG**
Senior Data Scientist (Recommendation System & CV)   *Jun 2021 – Aug 2023*
- Built a scalable recommendation system to recommend jobs to professionals using sentence embeddings and RAG techniques, resulting in 10X time reduction in HR manual sorting process, more effective and scalable than most ATS.
- Performing custom OCR tasks to leverage images to text of company's relevant documents.
- Built a web crawler along with the backend team
- Implemented GitLab CI/CD pipelines and workflows for Docker builds, unit testing, metrics reporting, and merge conflict checks to support MLOps and ensure codebase stability for the team.

Freelancer (Upwork, WhatsApp)   **San Francisco, US**
Data Science & Machine Learning Engineer   *Mar 2019 – Jun 2021*
- Top Rated Plus: Highly rated freelancer status (represent top 3% globally).
- 750+ hours of logged in effort of working on complex Machine & Deep Learning Projects with 100% Job Success Rate.

EDUCATION

University of Benin   **Dec 2019**
Bachelor of Engineering – Civil Engineering

Hamoye School of Data Science   **Dec 2020**
Data Science   Top 6 Globally

ACHIEVEMENTS
- TOP 6 in Hamoye School of Data Science (Worldwide)
- GCP Advanced Generative AI for Developers **- Google Cloud Certification**
- Understanding Ethical, Legal, and Security Issues in Data Science – **Plural Sight Certification**

PRODUCT BUILT
- app.curatelearn.com – *AI Powered Edu-Learning Platform*
- skyeyez.ai – *AI Powered Security Platform*