

# Damilola John Oduguwa

Software Engineering / Machine Learning.

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## EXPERIENCE

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### Machine Learning Intern

Nithub Unilag AI Research

2022 – 03/2023

Lagos, Nigeria

- Finetuned a YOLOv5 model that improved object detection accuracy by 30%
- Implemented a traffic optimization algorithm using data provided by ODS system
- Developed a Ray distributed computing cluster that reduced training time by 60%
- Implemented AWS Codepipeline and GitHub Actions workflow that seamlessly integrated with AWS Sagemaker.

### Machine Learning Engineer

Sienna AI

02/2024 – present

Lagos

- Designed and Deployed advanced RAG systems with Langchain and LlamaIndex.
- Built LLM agents that interacted with tools such as the Solana- blockchain, search engines, and Databases.
- Implemented custom function-calling for Llama2 for an enterprise use cases.
- Finetuned LLMS using model parallelism and data parallelism techniques in Cloud-hosted GPU instances.
- Deployed REST API endpoints for serving multimodal LLMS.

### Machine Learning Engineer

Remote Contractor

2023

Turkey

- Designed a customer service sentiment analysis for determining customer emotions in real-time using BERT that improved customer service ratings by 40%.
- Built a text-to-speech pipeline by finetuning OpenAI Whisper on Customer conversation data in a low-resource language.

## PROJECTS

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### Zeeno

- A website that lets users find books about any topic, description or period of history, using Semantic search.

- Recommendation Engine based on context Re-ranking and Semantic Search
- Built and indexed a vector database for storing embeddings using Pinecone that improved semantic search retrieval latency by 60%.
- Designed a Model as a Service (MaaS) platform using AWS Lambda saving inference costs by 80%.
- Created a provisional concurrency rule for improving lambda cold start times by 25%
- Automated the creation and deployment of Docker images in AWS ECR using Terraform.
- Dynamic locking of Terraform states that improved developer efficiency by 15%
- Implemented a CI/CD pipeline, using GitHub Actions reducing testing and deployment time by 80%.
- Finetuned embeddings using synthetic data and improved overall retrieval performance

### Redis Mini

An implementation of a key-value in-memory database

- Implemented the Redis serialization protocol for communication across sockets
- Implemented asynchronous handling up to 64 simultaneous clients using the SocketServer and ThreadMixin Library.

## EDUCATION

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### Bsc.Computer Engineering

University of Lagos

2025

Lagos, Nigeria

## SKILLS

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- Python, AWS, FASTAPI, Docker, Git
- Pytorch, Langchain, LlamaIndex, Terraform