ABIN ZORTO

MACHINE LEARNING ENGINEER

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Machine Learning Engineer with 2+ years of research expertise, specializing in deploying and scaling ML pipelines across cloud environments. Track record of reducing deployment time by 75% and handling 1M+ daily predictions. Experienced in cloud infrastructure, Kubernetes, and integrating AI workflows with modern GPUs. Skilled in optimizing data processing pipelines and implementing robust CI/CD practices.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C++, C#, R, SQL, NoSQL, Scala

Cloud & Infrastructure:

- AWS: EC2, S3, Lambda, SageMaker, Glue, ECS, RDS, CloudWatch, CloudFormation
- Azure: Machine Learning, Databricks, Functions, Kubernetes Service, DevOps, Active Directory, DataLake
- Google Cloud: Compute Engine, Cloud Storage, Kubernetes Engine, AI Platform

DevOps & Containerization: Kubernetes, Docker, Terraform, Git, GitHub Actions, Jenkins, GitLab

Databases: SQL, NoSQL, Neo4j, Vector Databases

Machine Learning & Data Science: TensorFlow, PyTorch, Scikit-learn, PySpark, NLTK

EXPERIENCE

Senior Research Assistant

University of East London September 2023 – July 2024

- Architected multi-cloud ML pipeline processing 100,000+ data points daily across AWS, Azure, and Google Cloud
- Orchestrated deployment of 3 production ML models using Kubernetes, increasing reliability by 35%
- Scaled serverless computing infrastructure handling 50,000+ daily requests using Azure Functions and AWS Lambda
- Established automated CI/CD pipeline reducing model deployment time by 50% using GitHub Actions and Jenkins
- Implemented robust monitoring and logging solutions using CloudWatch and Azure Monitor, improving system observability by 40%
- Optimized data processing workflows using PySpark, reducing query times by 60% on 5TB+ datasets

Teaching and Research Supervisor

University of East London May 2023 – September 2023

- Conducted 12 technical workshops on cloud infrastructure and DevOps practices for 100+ students
- Mentored 15 graduate students on implementing scalable ML solutions using Kubernetes and cloud services
- Guided 5 students in optimizing database performance for ML applications, focusing on Neo4j and vector databases

Junior Research Assistant

University of East London September 2022 – May 2023

- Designed and implemented healthcare ML models deployed on multi-cloud environments (AWS, Azure)
- Optimized data processing pipeline to handle 5TB+ of medical data using PySpark and Kubernetes
- Implemented secure data integration workflows compliant with healthcare data protection regulations
- Developed analytics workflow reducing query time by 60% using Azure Synapse and AWS Redshift

Retention Specialist

Direct Line Group January 2022 – March 2022

- Managed 200+ monthly customer interactions achieving 95% satisfaction rate
- Formulated stakeholder feedback system capturing 50% more actionable insights
- Contributed to 15% reduction in customer churn through data-driven engagement strategies
- Generated weekly analytics reports tracking 20+ KPIs for executive team
- Achieved top 10% performance rating among 50+ specialists

RESEARCH PUBLICATIONS

scholar.google.com/citations?hl=en&user=1yjR8x8AAAAJ (click to view)

- Authored ML-based keratoconus diagnosis paper achieving 85% accuracy rate - **Informatics in Medicine Unlocked** (Impact Factor: 5.2) (Citations: 5+)
- Pioneered novel GAN architecture improving sepsis diagnosis accuracy by 25% - **Applied Computational Intelligence**

TECHNICAL PROJECTS

github.com/AbinZorto (click to view)

MLOps & Infrastructure

- Orchestrated ML deployment system reducing release cycle from 24 hours to 6 hours across 3 cloud environments
- Scaled Kubernetes infrastructure supporting 200+ concurrent users with 99.9% uptime
- Optimized CI/CD pipeline reducing build times by 40% for 20+ microservices using GitHub Actions and Jenkins
- Automated resource provisioning across AWS, Azure, and Google Cloud, cutting deployment costs by 35%

Database Optimization

- Implemented and optimized Neo4j graph database for complex relationship modeling in ML applications
- Designed vector database solution for efficient similarity search in high-dimensional data spaces
- Developed data integration pipelines connecting multiple sources to centralized data lakes on AWS and Azure

AI and GPU Optimization

- Engineered YOLOv4 detection system achieving 64% accuracy on 50,000+ video frames, optimized for GPU acceleration
- Implemented distributed training pipelines for large language models using PyTorch and Kubernetes
- Optimized inference performance for NLP models using ONNX Runtime and TensorRT on cloud GPU instances

EDUCATION

PhD in Computer Science May 2023 – May 2026
University of East London
Research Focus: A Multimodal Computational Intelligence Approach to Neurophysiological Predictors of Transcranial Direct Current Stimulation for Depression Treatment

MSc Computer Science January 2021 – January 2023
University of East London Grade: Distinction (96%)
Thesis: Developed ML system improving medical diagnosis accuracy by 30%

MSc Advanced Robotics September 2019 – September 2020
Queen Mary University of London Grade: Distinction (81%)
Thesis: Created autonomous system reducing navigation errors by 55%

BEng Mechanical Engineering September 2016 – June 2019
The University of Manchester Grade: 2:2 (55%)
Final Project: Led 4-person team to design automated system improving efficiency by 30%