Adedotun John Akintayo
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Personal Website | **GitHub** | **Google Scholar Profile**

Summary

Experienced and innovative AI Technologist with over 10 years in software engineering, specializing in AI/ML technologies. Proven expertise in technology development, strategic planning, and team leadership. Eager to leverage my skills in AI workflows, cloud, and edge computing.

Education

- **Ph.D. Mechanical Engineering** | **Applied Machine/Deep & Reinforcement Learning** | Iowa State University (01/2014 – 12/2017).
    Research Focus: Hierarchical feature extraction from spatiotemporal data for cyber-physical system analytics
    Related Classes: Software System Safety, Microeconometrics, Cryptography, Optimization, Real Analysis
- **M.Sc. Control Systems** | **Intelligent Systems** | University of Sheffield - Sheffield, UK (08/2012 – 09/2013).
    Related Modules: Robotics, System Identification, Embedded Systems, and Rapid Controller Prototyping: (Drone Control Video),
- **B.Eng. Mechanical Engineering** | Ahmadu Bello University – Zaria, Nigeria (02/2005 – 12/2009).
    Relevant Courses: Production Management, Thermodynamics, FORTRAN/BASIC programming, Metallurgy

Professional Experience

Uni.Com LLC | Folsom, CA   03//2023 – Present
Co-founder | **CTO** | **Product Owner**
- Developed a social media connection framework, enhancing community interactions.
- Managed engineering teams for scalable, secure infrastructure development and predictive ML models for financial applications.
- Utilized Full stack Development, Data Science, and Reinforcement Learning in product design and implementation.

INTEL CORPORATION | Folsom, CA   07/2018 – 02/2023
Applied AI/ML Graphics Software Engineer | **Tech Lead**
- Innovated deep learning models, enhancing Intel graphics products and reducing time-to-market by 50-70%.
- Developed and tested dockerized AI models' training and inference in PyTorch, TensorFlow and ONNX on Intel compute platform.
- Innovated reinforcement learning agents for game interaction on Intel Architecture, validating more scenes for quality assurance.
- Implemented MLOps system, improving model server throughput by 400% and ensuring high data availability during critical server failures.
- Spearheaded AI model development in cloud and edge environments, focusing on testing E2E graphics multimedia applications.
- Automated high-level dashboard, reduced report generation time significantly, and expediting management decision-making processes.
- Led development of automated validation and debugging tools and co-published papers at Intel's DTTC.
- Collaborated closely with stakeholders from sales, marketing, architecture and other key units to develop, and implemented strategic end-to-end Intel discrete graphics testing road maps, called Xe Arc.

ETALYC Inc | Ames, IA   03/2018 – 06/2018
Research Scientist
- Spearheaded the development of autoencoder models for human movement detection, enhancing workplace safety.
- Experimented multiple model validation and hyperparameter tuning techniques and analyzed big data with Spark.

IOWA STATE UNIVERSITY | Ames, IA   02/2014 – 06/2018
Postdoctoral Research Associate & Graduate Research Assistant
- Developed machine learning tools for hierarchical feature extraction from IoT applications and complex cyber-physical systems.
- Developed innovative machine learning algorithms, such as 2D & 3D convolutional autoencoders, applied techniques such as denoising autoencoders, spatiotemporal pattern networks, neurosymbolic filtering for pattern recognition for autonomous systems.
- Published 7 papers in top-tier AI journals, including Nature Scientific Reports, Applied Energy, and presented at multiple top-tier conferences.

Skills

Technical:
- **Software Engineering**: CI/CD, SDLC**,** Full Stack Development, Docker, Kubernetes, Edge Computing, UX Design
- **Cloud Computing**: Google Cloud Platform, Google Colab, Intel Dev Cloud
- **Programming**: Python, C++, CUDA, HTML, Javascript, C# (Debugging)
- **AIML Libraries & Tools**: Machine Learning, Deep Learning, VAE, GAN, Sci Kit-Learn, TensorFlow, PyTorch, Theano, ONNX
- **MLOps & Enterprise Deployment**: Distributed Systems, MLFlow, Explainable AI, Ethical AI, Data Foundry
- **UX Design & Practice**: Web UX, Flask Dashboard, Redis Monitoring, Data Analytics (Kafka)
- **AI Application**: Intelligent Gameplay, Low light Image Enhancement, Pest Detection and Counting, Anomaly Detection
- **Debugging & Problem-solving:** Troubleshooting, Code Review, Feature Review, HW/SW/FW issues tracking and resolving, PIX
- **Graphics API**: D3D11/12 pipeline, Vulkan understanding, OpenGL, WinML
- **Continuous Learning**: Java, Transformers, LLM, Langchaining

Soft:
- **Excellent Communication**: Excellent communication skills, with a track record of collaborating effectively with cross-functional teams, presenting technical findings to non-technical stakeholders, and authoring and publishing research papers
- **Growth Mindset**: Continuous Learning, Kaizen Culture, Adaptability, Flexibility
- **Leadership & Influence**: Managed diverse teams across multiple global locations, fostering collaboration and innovation. Led technical and strategic planning for AI initiatives, guiding projects from conception to deployment.
- **Problem Solving & Decision Making**: Implemented data-driven decision-making processes, enhancing product quality and operational efficiency. Solved complex technical challenges in AI model development and deployment, leading to significant improvements in product time-to-market.
- **Collaboration & Teamwork:** Coordinated with stakeholders from marketing to architects, shaping strategic road maps for product testing. Communicated complex technical concepts to diverse audiences, ensuring alignment of project objectives.

Certifications
- **Software Development Life Cycle**, **Project Management, Leadership:** Intel
- **Google Cloud Platform**, **Dynamic programming**, **Quantum Computing**: LinkedIn

Selected Awards
- **Program Management/Product Quality**: Gold and Silver Awards for ticket triage, debug & disposition | 2022.
- **Excellence**: Harry Nicholson Award, University of Sheffield | 2014.
- **Leadership**: Department Recognition Award for Xe Arc Graphics, Intel | 2022.
- **Industry Influence**: Top 10th percentile Reviewer Award in Pattern Recognition | 2017.
- **Innovation:** Best Poster Award for Predictive Phenomics in Plants by D3AI | 2016.

Recent Volunteer Experience
- Engaged in community service, focusing on educational endeavors and tech education for the elderly.

Hobbies & Interests
- Adventures, Soccer, Pingpong, Short-distance driving, learning new skills

Relevant Publications: [Google Scholar Profile]

1. [LLNet: A deep autoencoder approach to natural low-light image enhancement]
   KG Lore, A Akintayo, S Sarkar; 2017 Pattern Recognition 61, p650-662

2. [A deep learning framework to discern and count microscopic nematode eggs]
   A Akintayo, GL Tylka, AK Singh, B Ganapathysubramanian, A Singh, …;2018 Scientific reports 8 (1), p1-11

3. [Prognostics of combustion instabilities from hi-speed flame video using a deep convolutional selective autoencoder]
   A Akintayo, KG Lore, S Sarkar, S Sarkar; 2016 International Journal of Prognostics and Health Management 7 (4)

4. [3d convolutional selective autoencoder for instability detection in combustion systems]
   T Gangopadhyay, V Ramanan, A Akintayo, PK Boor, S Sarkar, …; 2021 Energy and AI 4, 100067