

OBI AI Foundation:

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When building an AI System, we are tasked with a challenging endeavour of ensuring a black-box model behaves coherently as intended. Our objective here is to **white-box** this AI

Model system – I, Nnamdi Michael Okpala, have devised a system methodology to enable developers to shift from the black-box paradigm and build a transparent ai system with a clearer relationship between input and output.

Problem 1 - Traditional AI is naturally Biased:

Traditional Artificial Intelligence is naturally biased. An analogy which I pose is how current AI System Learn from patterns. As we humans are building AI to be pattern matchers, no matter the system you implement, this limitation of pattern identification and matching will have significant consequences.

I hypothesise that AI systems which are limited to the analysis of patterns should be trained to create a holistic representation. We are not just training the AI to classify; we are trying to make the AI system adapt respectively to the context of its environment. We are Data Scientists, and should enforce a white-box system in development for transparency and ease of use, and accessibility.

Some Proposed Solution of Mine:

- AI Reduction Principle – This principle states that AI Modules should have enough network space to model and effectively comprehend what they need to. For example, when making a two-dimensional video game. AI Navigation of the brain should use 3d Data Structure (KNN) and Operations to better understand how the world operates for maximum flexibility, allowing our deep learning neural network to make decisions and not hallucinate.
- We can use two-dimensional models for the neural network, but it will have a type of information overload and find it harder to make effective decisions.
- This all should be working with a proper Bayesian network classification to classify an AI system and weight data using either a DAG Directed Acyclic Graph:

- Bayesian Top-Down Inference:
This means we build the Unbiased AI System all set up with Bayesian inference and the associated Bayesian algorithms. This is a form of inductive reasoning.
- Bayesian Bottom-Up Inference:
This starts with the data being unbiased and much simpler to implement, as the AI System is not fed biased data, we can then perform bottom-up inference.

This can be applied in a real-life cancer detection system. For example, consider a Traditional AI System that detects cancer by matching patterns in data to classify the demographics of cancer. This AI system is biased with a deep network and can misclassify non-ethnic demographics. This means that when two people of the same age have cancer, one from Africa and the other from the United Kingdom, both aged 30.

They are both heavy smokers and drinkers. Probably, an AI system will mistakenly classify an African ethnic individual as the collection of data is poorly fault-tolerant.

Problem 2 - Traditional AI Training skews data, leading to more bias in deep net systems.

Traditional AI BlackBox is a fully natural deep neural network system. These AI Systems

AI systems' traditional navigation through a black box. The models create deep nets, where a deep net is a skewed pattern within the black-box model that is a traditional AI system.

Traditional AI Model training, which is comprehensive, provides significant challenges:

- Supervised Learning Introduction is the process of supervising an AI system to correctly classify an image, such as a dog or a cat, and yield the correct output. Black box naturally skews this as they have a black-box system

The problem is that the more image cat/dogs you feed in it will keep getting deeper trying to match patterns with 4d tensor, 3d tensor, etc, simultaneously. This is known as a deep network. This intricacy uses more power than the nuclear silo and makes training harder after each model iteration.

- Traditional AI System, when trained, uses an Unsupervised model to classify a collection of images of cats, dogs, and mice. This AI system will still be subject to deep learning. This model is unsupervised when done classifies which will then be skewed, black-box, and the same pattern will repeat the representation of the pattern. This AI is degraded slowly.

- Reinforcement Learning:

Reinforcement Learning is an adaptive algorithm where the output says an image

is fed back into an AI System or classification as a seed, and the enhancement will ensure.

Problem 3: AI Architecture present significant limitations from development to production.

An AI Architect should be well-versed in a component system – AI system implementation should utilize enhanced in the broader category of Robotics. AI System should build a modular, non-monolithic architecture where, for example, accessibility components, and LLM components work cohesively in one system, where voice accessibility Is supported can be toggled enabled or disabled.