

The Role of AI in *Unlocking Potential and Building Resilience in the Insurance Industry*

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Artificial Intelligence

*The development and deployment of Computer Systems or Machines that can perform tasks requiring **Human-like Intelligence**, such as*

- (1) Learning**
- (2) Problem-Solving**
- (3) Decision-Making**

Generative AI

- *Generative AI (Gen AI) is a special type of AI that uses algorithms & models to create new content or novel ideas.*
- *This can include the creation of images, music, text, reports, or even entire virtual environments.*
- *– New content and knowledge.*
- *Recent highly popular examples of Gen AI are OpenAI's ChatGPT 5, Google's Gemini (Ultra, Pro, Flash & Nano) and Stability AI's Stable Diffusion; xAI's Grok 4*

Dangers and Risks of AI

- *Algorithmic bias: AI can reinforce societal inequalities.*
- *Data security risks: Vulnerable to breaches and misuse.*
- *Job displacement: Reduction of employment opportunities.*
- *Ethical misuse: AI could be used for manipulation or harm*
- *AI in the hands of bad actors (fake news, disinformation, misinformation, cybercrime)*
- *Hallucinations (wrong answers, fictitious references/citations)*
- *Widening of global inequality*
- *Data colonialism & Digital Imperialism*
- *An AI-driven Arms Race*
- *Techno-Feudalism*

Techno-Feudalism (The Five Men)

- *Sam Altman, CEO of OpenAI*
- *Elon Musk; Founder of xAI (Grok 4)*
- *Jensen Huang, CEO of NVIDIA*
- *Demis Hassabis, Co-founder and CEO of Google
DeepMind*
- *Ilya Sutskever, Co-founder of OpenAI, Founder and
CEO of Safe Superintelligence*

The Economic Impact of AI

- A projected contribution of **USD \$11 trillion** to Global GDP (currently USD **110 trillion**) in **2025**
- **10% of Global GDP** (ambitious estimate)
- **Gen AI** alone will add **\$4 trillion** annually to the Global GDP (3.7%)

*What is **driving** this massive economic impact of AI?*

*One-word answer: **Productivity!***

*AI has a **Staggering Impact** on Productivity*

*(**Productivity** per capita)*

AI Semiconductor Industry

- *Semiconductor Industry (Design and Fabrication)*
- *Building processors that power AI Systems*
- *CPUs, GPUs, NPUs*

Chips that power AI

- *Specifically ChatGPT & LLMs in general*
- *The chip industry is dominated by TSMC and NVIDIA*

NVIDIA CEO Jensen Huang says:

“AI will create more millionaires in the next 5 years than the internet did in 20 years.” (11 August 2025)

***He is worth US\$155 billion (NVIDIA - US\$5.03 trillion)
(Elon Musk –richest man in the world – US\$500 billion)***

How many people will AI help move out of poverty?

That should be our question?

*China moved 800 million out of poverty in 40 years.
(60% of its people)*

China and the USA are the leading AI superpowers

What are China's lessons to Africa?

AI Impact on Jobs

1. *THREE CATEGORIES*

- *Job displacement (Job Losses)*
- *Job modification (Human Augmentation)*
- *Creation of NEW Jobs*

2 *WHAT NEEDS TO BE DONE*

- *Reskilling job losers*
- *Reskilling & preparation for modified jobs*
- *New skills, capabilities & competencies to take advantage of NEW jobs*
- *Continuous reskilling/education as AI evolves*

Renaissance Men and Women

- *We must become All-Rounders*
- *We must master multiple disciplines*
- *An Engineer who understand Law and Economics*
- *A Lawyer who understands Technology and Finance*
- *A Doctor who understands Philosophy and Entrepreneurship*
- *A Historian who understands Artificial Intelligence and Medicine*

*Applications in **Every Sector** in
Africa*

Illustrative Examples

AI Systems for Agriculture

- *Precision Farming*
- *Crop Monitoring and Disease Detection*
- *Automated Machinery*
- *Yield Prediction and Analysis*
- *Livestock Management*

AI for Infrastructure Development

- *Smart traffic management*
- *Predictive maintenance*
- *Automated construction*
- *Energy efficiency optimisation*
- *Damage detection*

Role of AI in the Insurance Industry

1) Unlocking Potential

2) Building Resilience

*AI **Unlocking** Potential*

- 1) **Escalation of Productivity***
- 2) **Enhanced Efficiency***
- 3) **Cost Savings***
- 4) **Increased Innovation** (new products, methods, systems)*

AI in the Insurance Industry: An Overview

- **AI transforms insurance through automation and analytics**
- **Enhances efficiency in underwriting, claims, and risk analysis**
- **Improves customer experience and personalisation**
- **Reduces fraud and operational costs**
- **Drives innovation and competitiveness across insurers**

AI in Risk Assessment and Underwriting

- Uses big data and machine learning to assess risks accurately
- Analyses demographics and real-time behaviour data
- Automates underwriting for faster policy issuance
- Improves pricing precision and fairness
- Supports personalised, dynamic insurance products

AI in Claims Management

- Automates claims verification and processing
- Uses image recognition to assess damages instantly
- Identifies fraudulent claims with pattern analysis
- Reduces settlement time and improves transparency
- Enhances customer satisfaction with faster payouts

AI in Customer Experience

- Provides 24/7 support through chatbots and virtual assistants
- Personalizes offers based on customer behaviour
- Predicts future customer needs to enhance service
- Improves communication via natural language processing
- Supports seamless, omnichannel customer engagement

AI in Fraud Detection and Prevention

- Detects abnormal patterns using predictive analytics
- Monitors transactions in real time
- Flags inconsistencies across data channels
- Reduces false positives via continuous learning
- Strengthens profitability and customer trust

AI → Building Resilience in Insurance

AI & Resilience in Insurance: An Overview

- **AI strengthens insurers' ability to adapt to disruptions**
- **Enhances operational continuity during crises**
- **Improves predictive capacity for emerging risks**
- **Supports shift from reactive to proactive risk management**
- **Drives long-term competitiveness and stability**

AI for Risk Prediction & Early Warning

- Analyzes massive datasets to detect risk patterns
- Predicts natural disasters and climate-related events
- Provides real-time alerts for emerging threats
- Improves underwriting decisions with advanced forecasts
- Reduces losses through proactive intervention

AI in Operational Continuity

- Automates critical workflows to reduce human dependency
- Ensures uninterrupted service delivery during crises
- Uses intelligent routing to manage claims surges
- Enhances resilience through cloud-based AI systems
- Supports remote operations and digital servicing

Fraud Prevention & Financial Stability

- Identifies suspicious behaviour using anomaly detection
- Reduces fraud-related losses during volatile periods
- Strengthens financial stability with accurate pricing
- Minimises claim leakage via precise assessments
- Protects insurer balance sheets in unstable markets

AI for Customer Trust & Adaptive Services

- Improves support with AI-powered service models
- Provides personalized guidance to policyholders
- Enhances transparency with data-driven insights
- Maintains loyalty during disruptions
- Enables adaptive, flexible insurance offerings

*Examples of **AI Tools** in Insurance*

AI in Insurance

Shift Technology: Detects fraud in claims. Analyzes data for suspicious patterns.

Cape Analytics: Uses property images. Helps assess property risk instantly.

Lemonade AI: Automates policies and claims. Chatbots and models enhance service.

AI in (Insurance) **Robotic Process Automation**

UiPath: Automates repetitive tasks. Enhances financial workflows.

Automation Anywhere: Uses bots for back-office. Handles unstructured data.

Blue Prism: Enterprise automation. Combines RPA with AI decisions.

***Embracing the AI Revolution
demands a Writing Culture***

***Africans must contribute to
AI Thought Leadership***



SPRINGER NATURE
Sustainable Development Goals Series

SDG: 9
Industry, Innovation and Infrastructure

An aerial photograph of a modern architectural complex, possibly a university or research center, situated on a peninsula or near a large body of water. The buildings are multi-story and feature curved, organic shapes. A road with several lanes curves around the buildings. A small boat is visible on the water in the foreground.

Arthur Guseni Oliver Mutambara

Deploying Artificial Intelligence to Achieve the UN Sustainable Development Goals

Enablers, Drivers and Strategic Framework

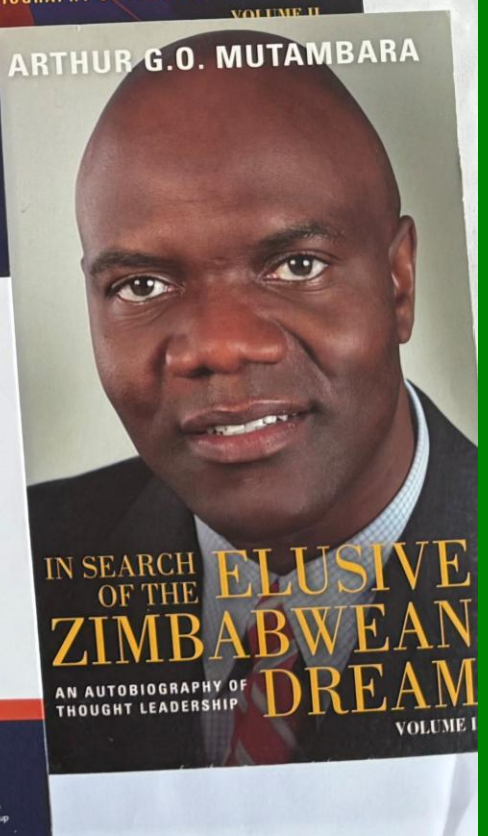
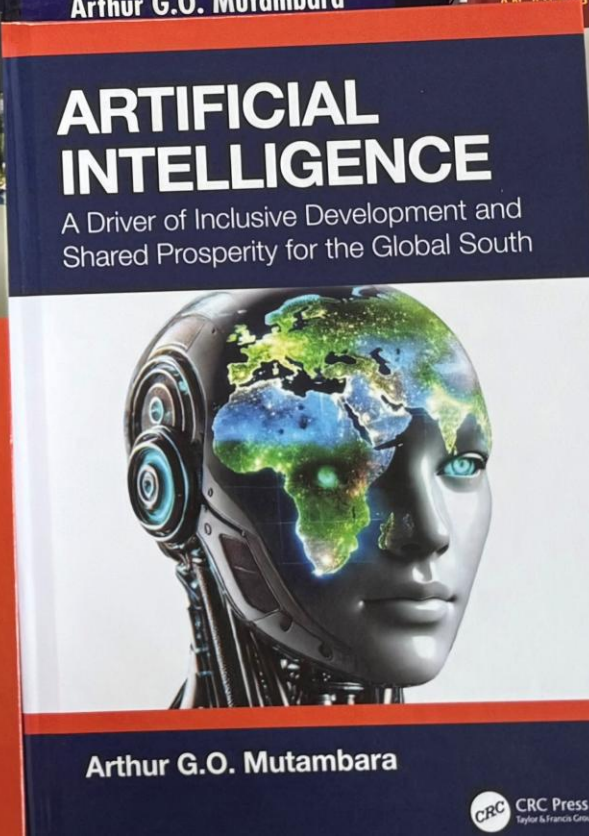
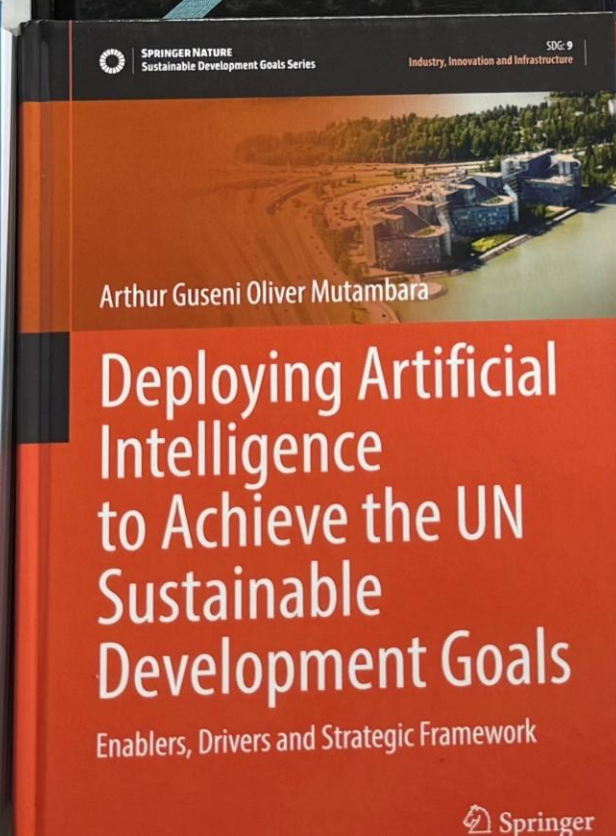
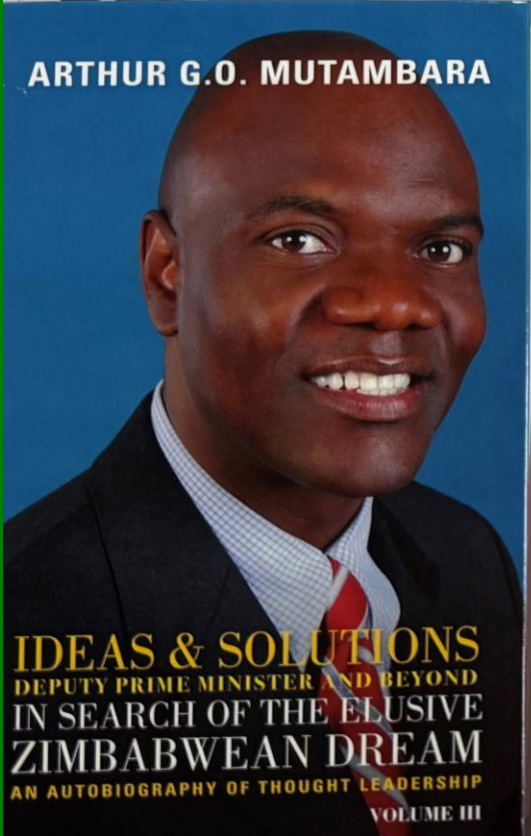
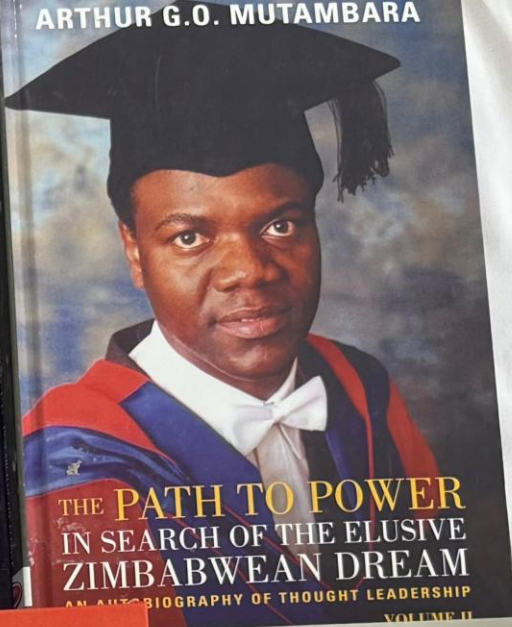
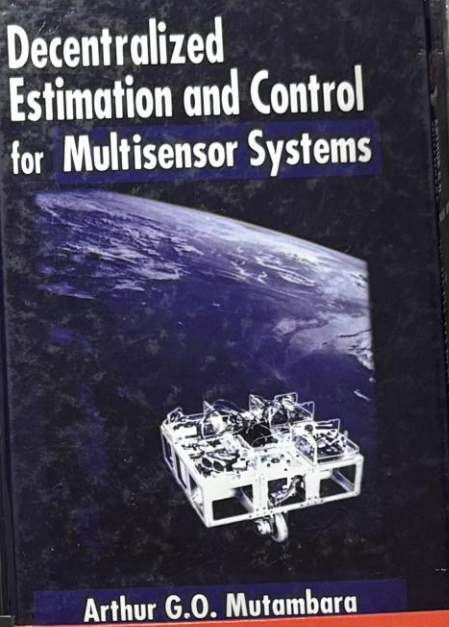
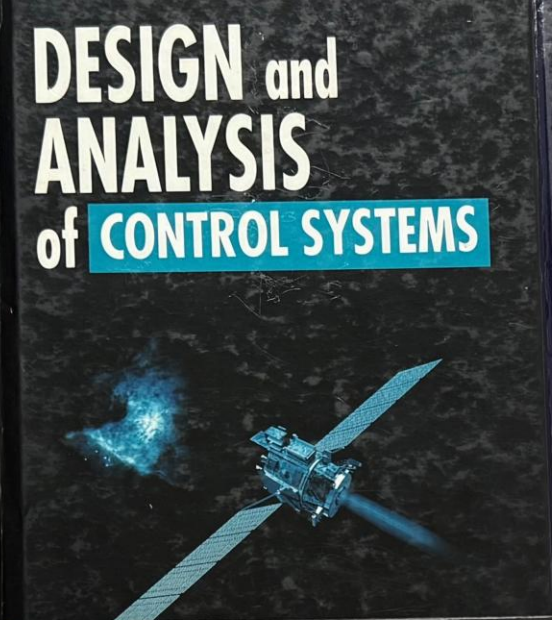
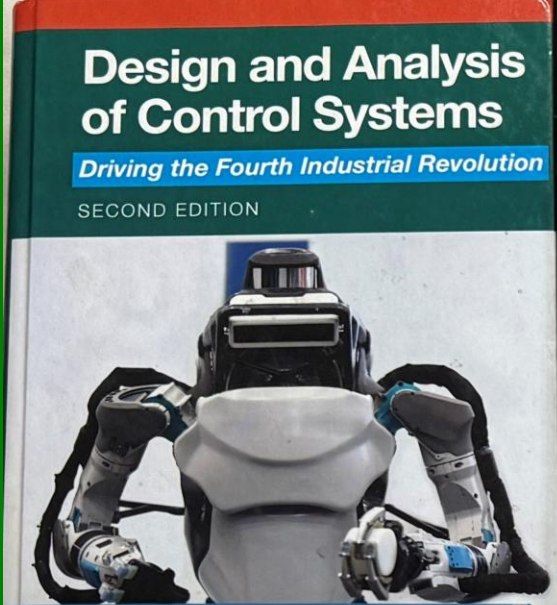
 Springer

ARTIFICIAL INTELLIGENCE

A Driver of Inclusive Development and
Shared Prosperity for the Global South



Arthur G.O. Mutambara



*We need **both***

A Writing Culture

&

*A **Reading Culture***

Concluding Remarks

**The Insurance Industry *MUST* use AI
to:**

1) Unlock Potential

and

2) Build Resilience

Embracing AI in the Insurance
Industry is not a
Nice-to-Have

It is an existential matter.
(Adopt AI or Die)

Thank You