



## INTEGRATION OF AI IN RESEARCH FOR DEVELOPMENT

Dr. John Aoga, Data scientist & Programmers



## What's AI?

RUFORUM Conference  
04th Dec. 2021

## BIOGRAPHY



Dr. John Aoga

**Who am I?**

Doctor & Engineer in Science and Technology  
Specialist in Data science & AI  
**Online Content author and Teacher**  
Co Founder of MIFY SARL company

**Goals and Aspirations**

Promote and develop AI 4 Africa in Africa  
Make a big impact with professional slides.  
Make a big impact with professional slides.

**Domains & Interests**

Algorithms and Optimization  
Data/Pattern Mining Approches and applications  
Deep Learning & NLP for local languages  
Social Data Analysis

**Scientific References**

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## ARTIFICIAL INTELLIGENCE

What is AI?



**PROGRAMM**  
**MACHINE**  
**OBJECT**

**Reasoning**  
Simulate reasoning (understanding)

**Adaptation**  
Can understand & live in its environment

**Not necessary from Human**

**A** **B** **C**

**Problems**

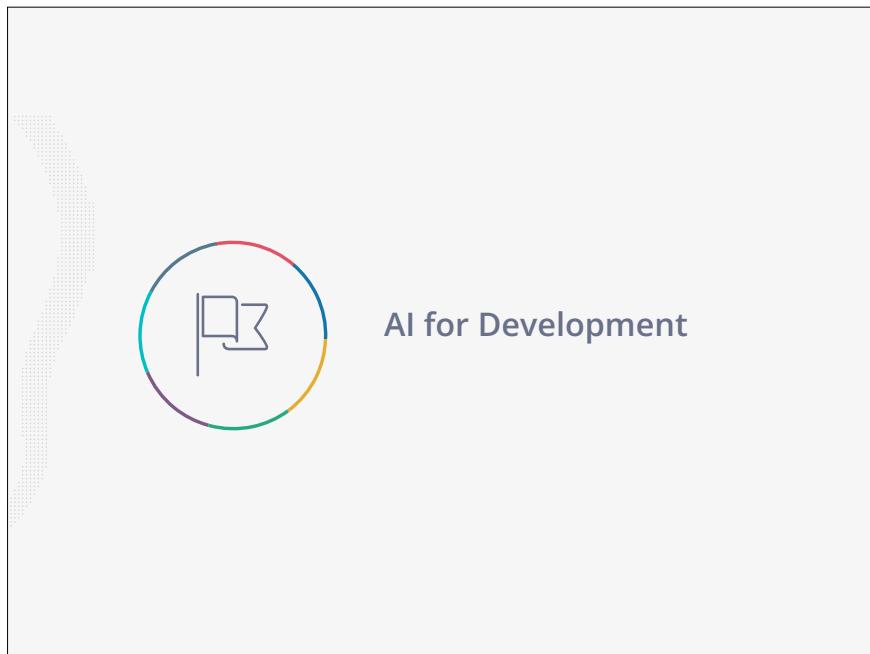
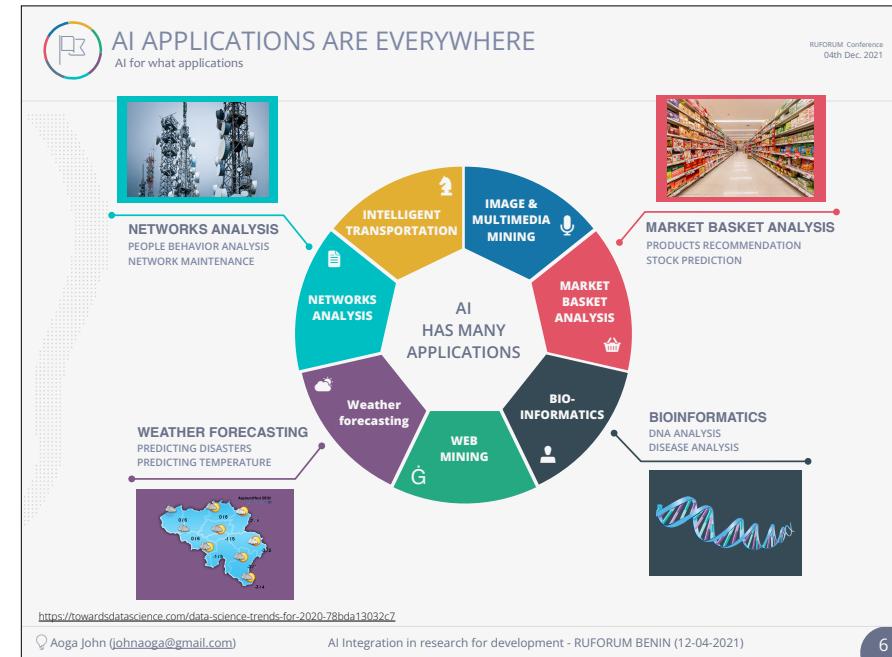
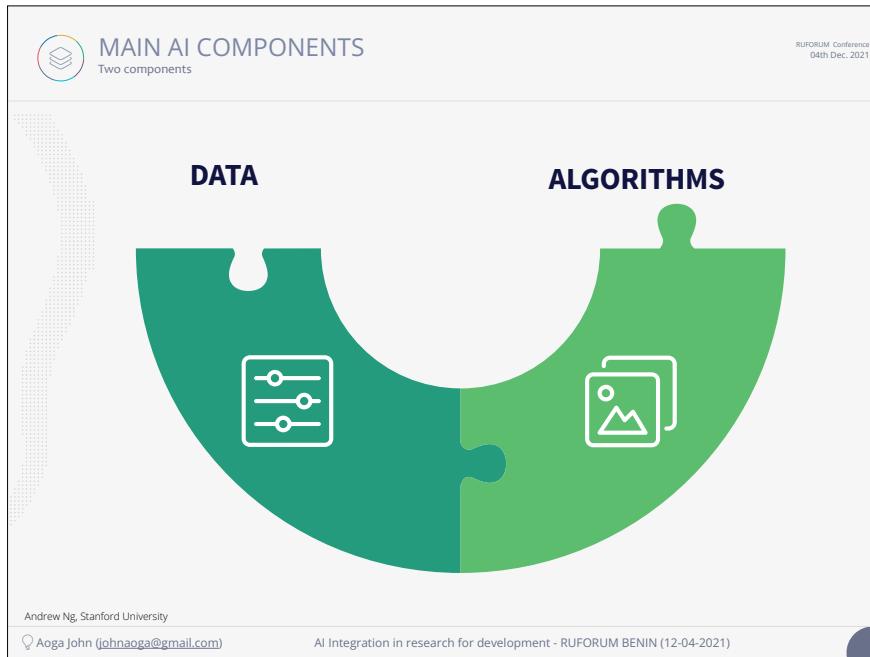
Solve Problems (Find feasible solutions)

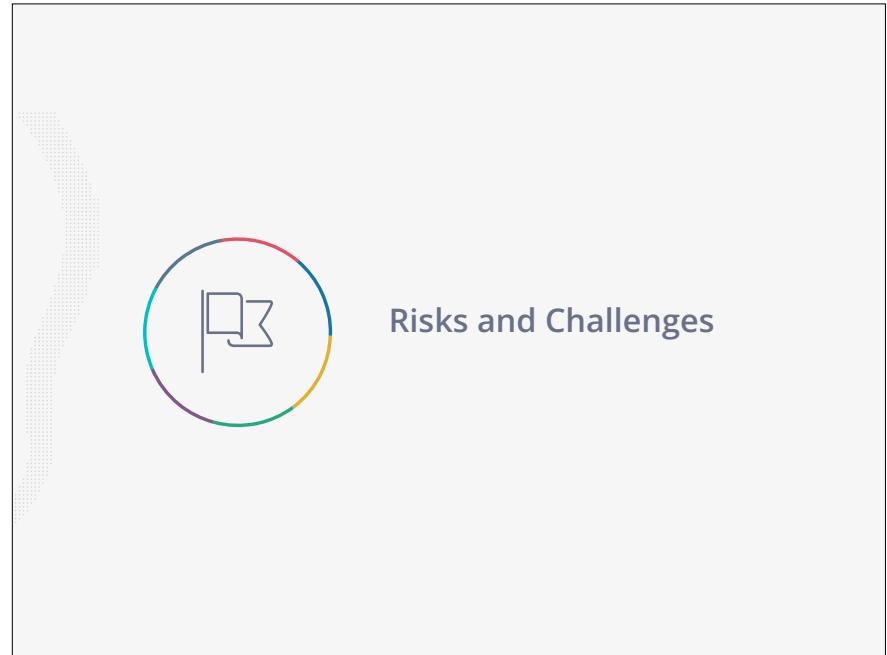
McCarthy, 2011 + Russell and Norvig (2010)

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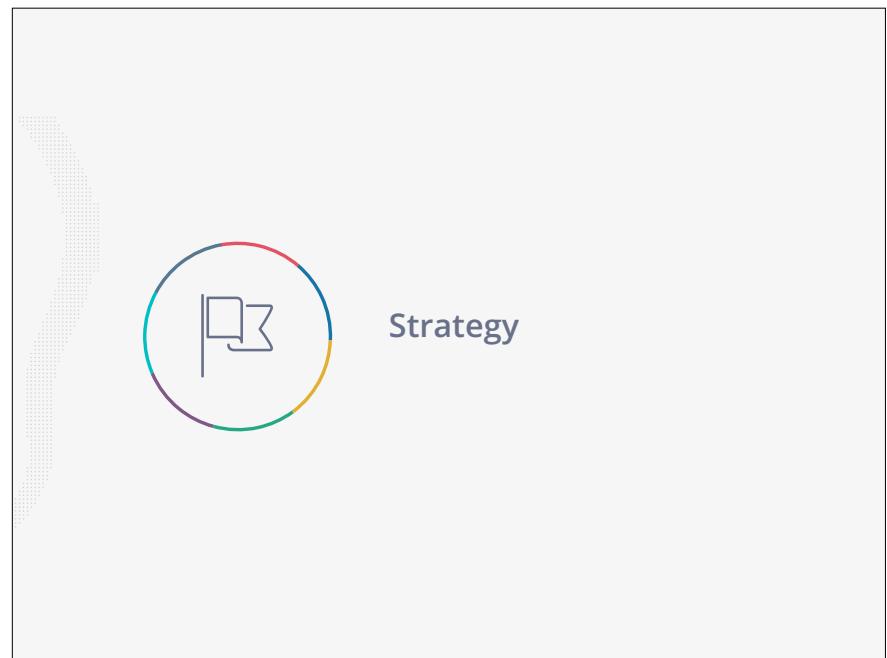
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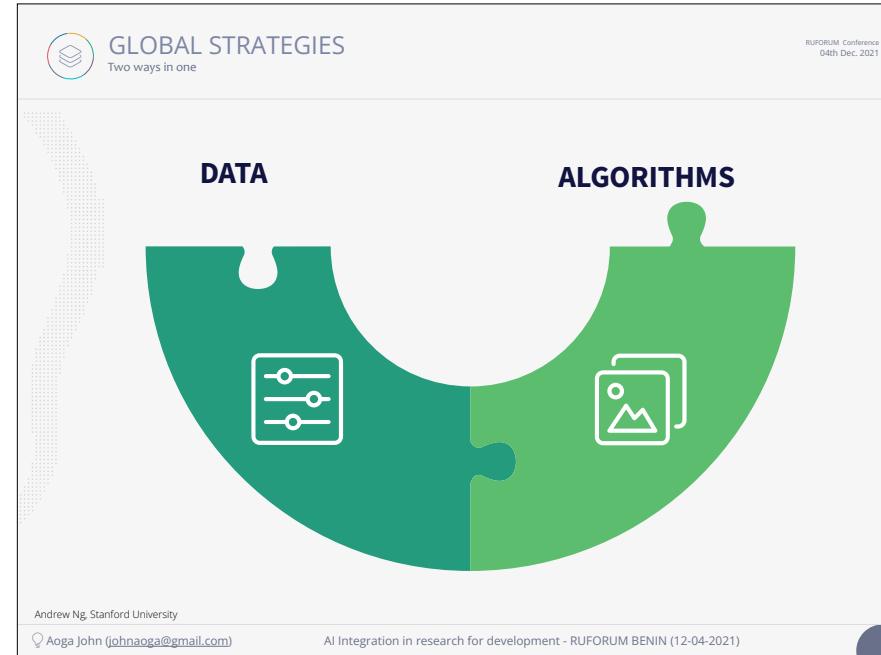
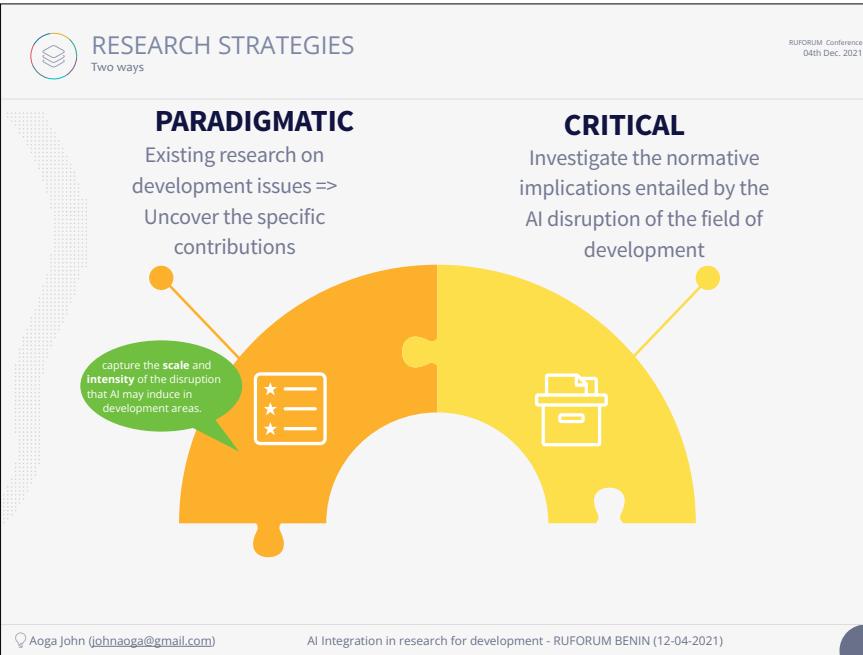
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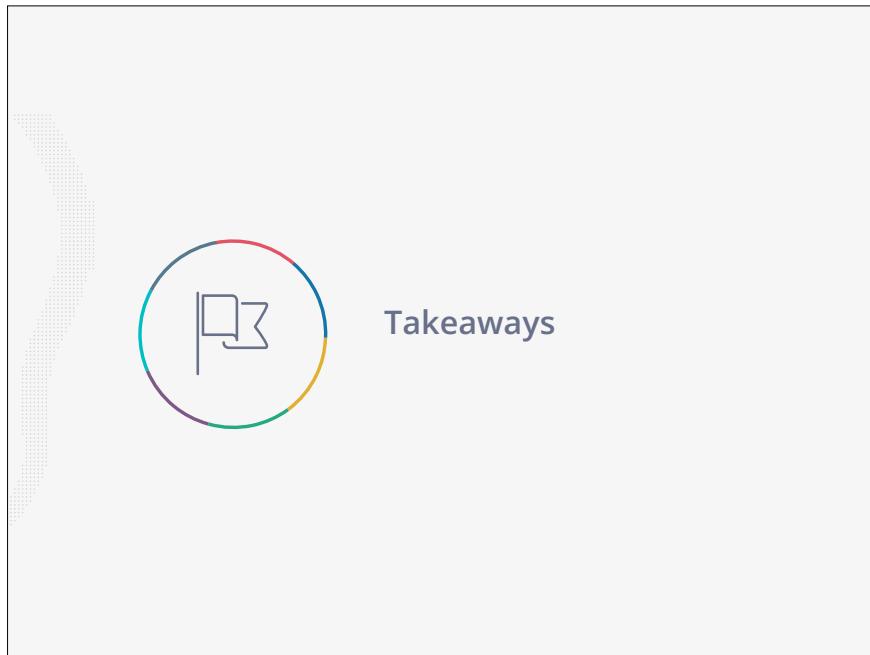
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- RISKS AND CHALLENGES**
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- Feasibility of applying to development issues
    - ▶ Existing of appropriate data
    - ▶ Challenge of scholars and policy makers to tailor AI to needs and priorities
  - Performance gaps
    - ▶ AI promises vs AI delivers
    - ▶ (COVID-19 as accelerator) Easy-to-use platforms
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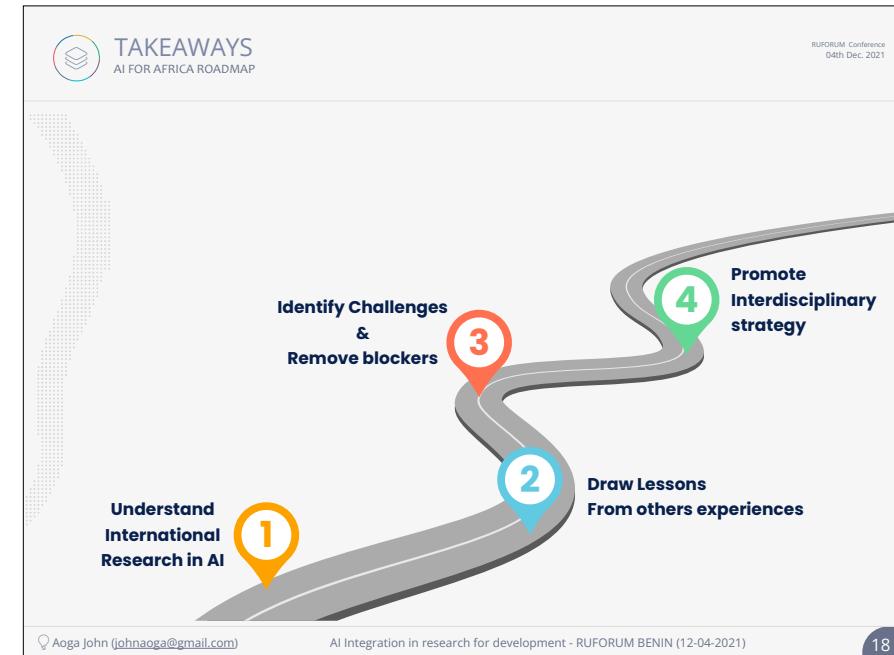


-  GLOBAL STRATEGIES
- Invest in Education (For AI & in AI)
- ▶ Use NLP tools to convert existing educational content and other in our languages
  - ▶ Use NLP and other AI approaches to make online education effective (auto-grading, peer evaluation, community handling)
- Promote Cross-Fields Research
- ▶ Weather, Economy & AI
  - ▶ Food Sustainability & AI
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-  EXAMPLE: AI SUPPORTING ONLINE PRODUCTION
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- ▶ Provide Tools to share work (virtual classroom, )
  - ▶ Produce content (remove audio/video noise, correct video, add caption in other language, video summary, translate into another language)
  - ▶ Build Exercises and Evaluate Students (Auto grading, promote interactions)
  - ▶ Knowledge acquisition diagnostics and student profiling
  - ▶ Breaking barriers (easy-to-use platforms, drive motivation in using platform, ...)
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## Takeaways



**RÉSUMÉ DE LA PRÉSENTATION**

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- ▶ L'intelligence artificielle? Avec beaucoup d'applications
- ▶ Ces facettes
- ▶ L'IA pour le développement durable
- ▶ Les leçons de l'existence (intégration de données, IA éthique, approche interdisciplinaire)
- ▶ Les risques et défis (applicabilité des outils, les gaps de performances)
- ▶ Stratégies de recherche (pragmatique et critique)
- ▶ Stratégie globale (investir dans l'éducation pour l'IA et avec l'IA, promouvoir la recherche interdisciplinaire)

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**RUFORUM** Capacity Building in Agriculture

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