Advancing Caribbean Innovation with AI

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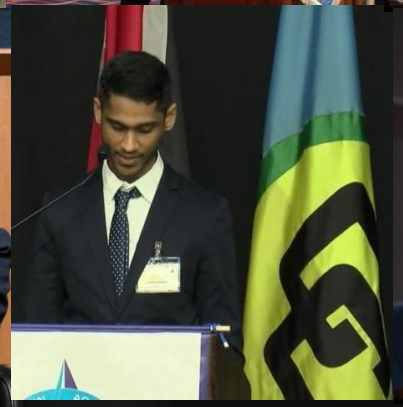
United Nations Secretary-General's
High-level Advisory Body on Artificial Intelligence

Theoretic Research ▪ Applications & Implementation Research ▪ Policy ▪ Education



Intelligent Systems Lab

Impact through Systems Learning

Research focus

AI Theory and Governance. Decision & Control Systems.

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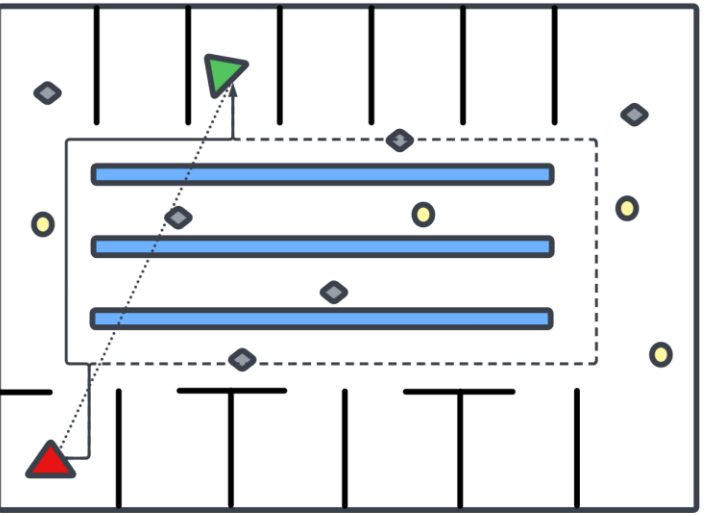

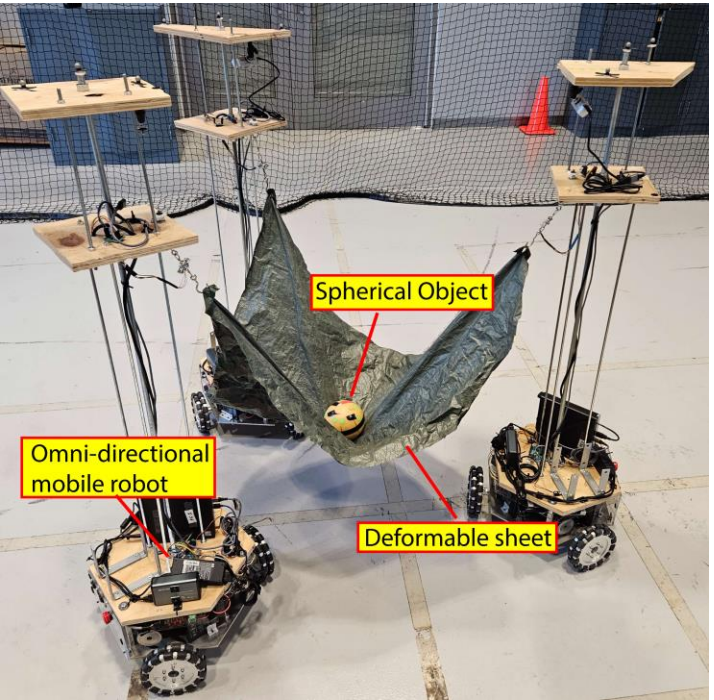

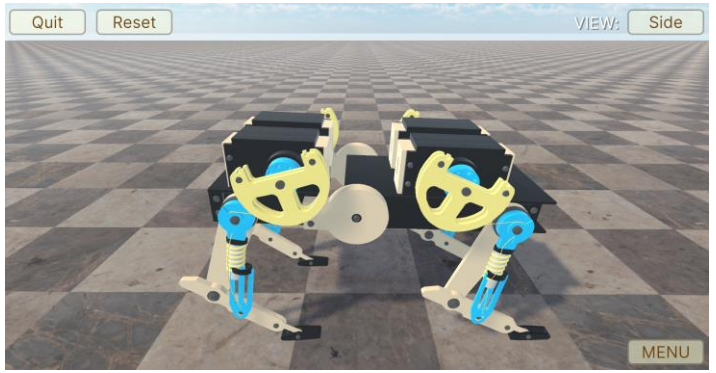

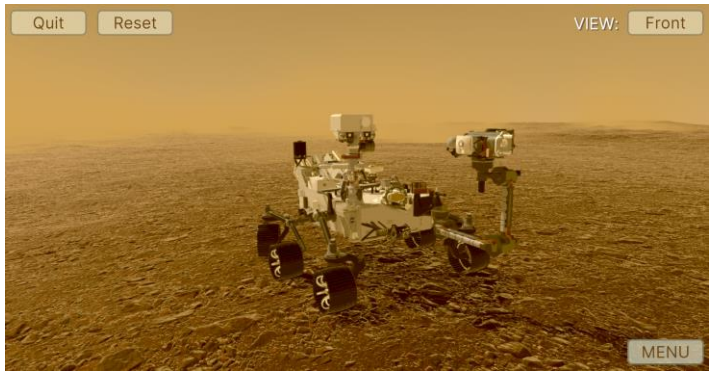

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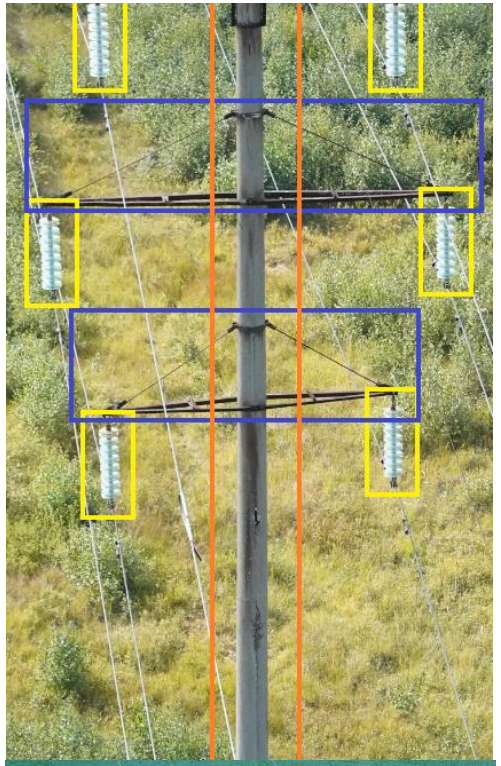
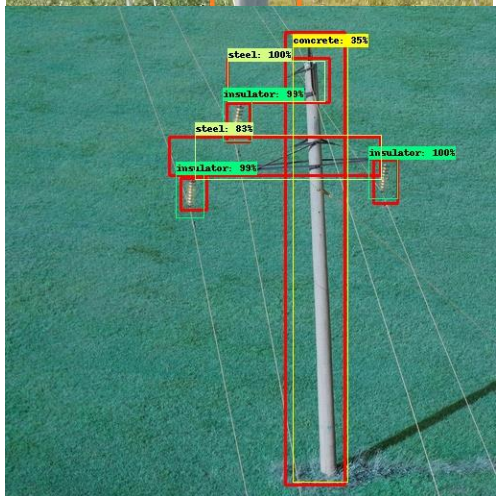




Intelligent Systems Lab

- Multi-Agentic Dialogue-Games for Enhanced Reasoning & Planning Language Machines
- Quantitative Risk Framework for AI systems
- Industrial AI for SCADA Systems
- Byte-Level Generative Networks: At Scale Universal Approximators are Number System Invariant
- Federated Database Systems for AI Memory Management

International Guidelines and Recommendations

UN Secretary General's AI Body Final Guidelines and Recommendations

UN Global Digital Compact: Objective 5

Consultations and Knowledge Pooling

Stakeholder Engagement

- 250+ written submissions from 43 countries (participants were represented from all regions)
- 100+ papers
- 40+ consultations (participants were represented from all regions)

Sector Specific

- 18 deep-dives

Quantifying Risk

- 350 Risk Poll respondents across 68 countries (participants were represented from all regions)

Questions were themed on:

1. Why AI governance?
2. Should it be regional or global?
3. How would proposals fit into emerging governance landscape?

AI Governance Functions

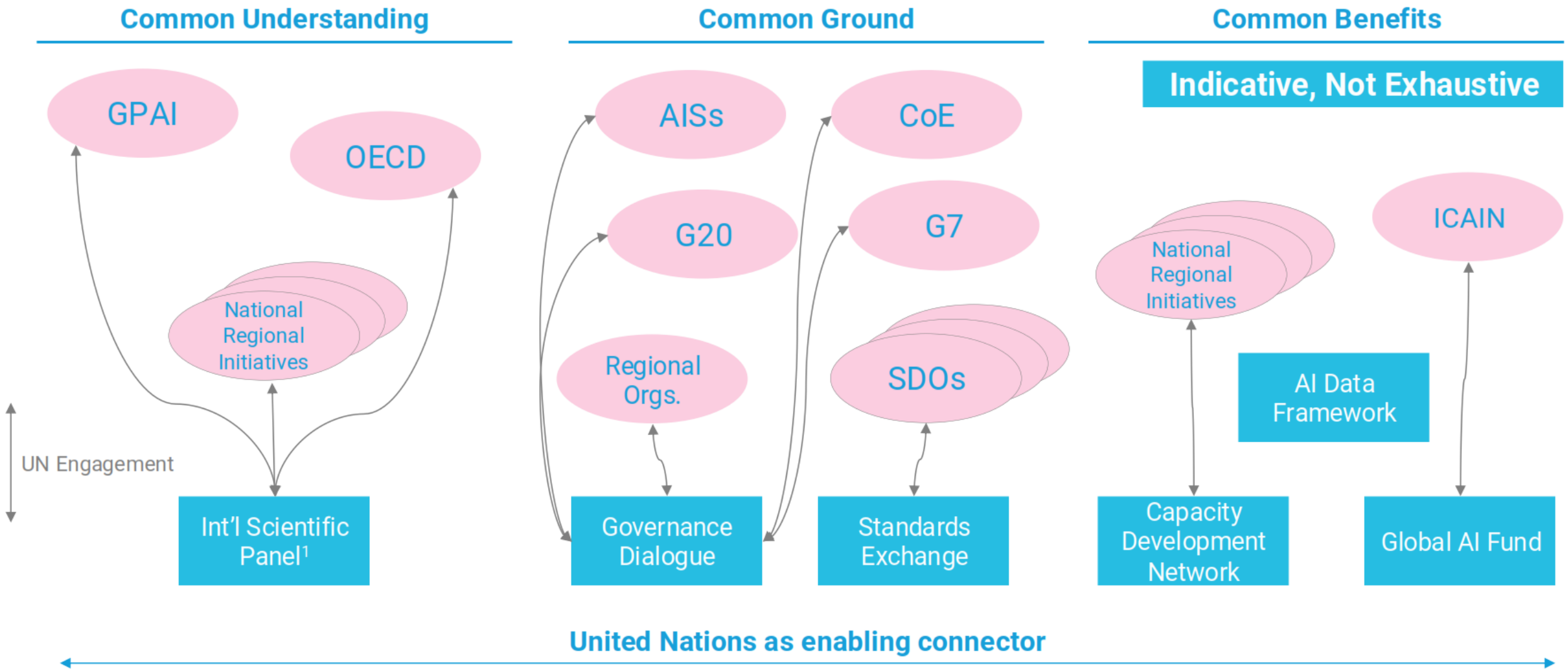
Reliably inclusive approach to AI governance needed

Equity
- Whole of humanity implications demands globally inclusive governance
- New social contract and sharing of beliefs/burdens in line with human rights
- Enablement of local experimentation, adaptation, autonomy, ownership, harnessing of opportunities

Effectiveness
- Information flows, knowledge-pooling and learning (incl. with non-likeminded countries)
- Enabling soft coordination between plurilateral / regional initiatives
- Averting unsafe race dynamics (e.g. race to the bottom on safety, scope of use etc)
- Cross-border interoperability in AI governance and standards

Efficiency
- Drawing on pre-existing commitments
- Networking together existing organizations

Connections for common understanding, ground, benefits in the int'l AI governance ecosystem



The Digital Caribbean

Advancing the edge of AI by playing to our strengths

Building AI Capacity in a Nation/Region

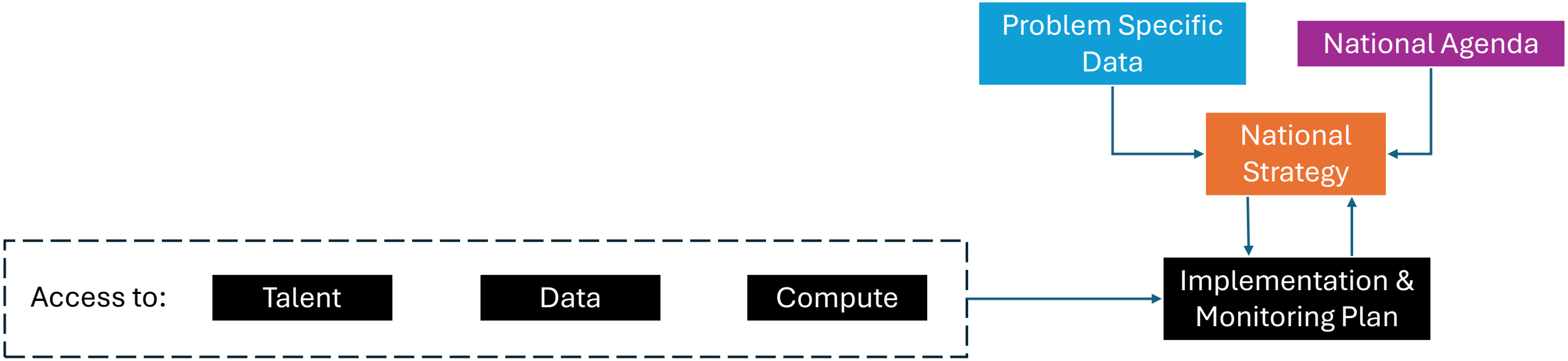


*Diagram shows high-level blocks and is not detailed

Consultations with the Group of Latin American and Caribbean Countries - Concerns

May 21 2024

- The region is already lagging behind in terms of development and deployment of AI as well as governance of AI and data; if not corrected it will deepen the divide and the technological and economic dependence of the region.
- The region serves only as exporters of data and there exists an external technological-economic dependency.
- There exists many different types of vulnerable groups within the region that are may be affected by the use of AI and are neither protected nor included in the discussion about AI in the region.
- Labor shifts will primarily affect low-income individuals and already vulnerable groups within the region
- Inability to protect the population and national/regional enterprises from external corporations that penetrate from outside the region.
- Use of AI in the public and judiciary sector without regulation or guidance may infringe the fundamental rights of the population.

Consultations with the Group of Latin American and Caribbean Countries - Opportunities

- A regional AI governance framework may be needed to harmonize the disparate approaches to governance of AI and data in the region encouraging academia and private sector to become providers of technology and knowledge.
- Support the creation of a public international fund to enhance AI opportunities in the region.
- AI, data governance and connectivity need to be considered together to successfully govern AI and exploit its full potential responsibly.
- We must ensure sovereignty over the data the region produces and exports.

The Caribbean yin-yang of AI

- Job augmentation and creation

- **Job displacement**

Workforce

- Improve educational equity and quality

Education

- **AI integration and public policy**

- Content production and outreach

Tourism & the Arts

- **Data Access, transparency**

Addressing Capacity Development

UWI's

Postgraduate Programmes on Artificial Intelligence

The technical study of artificial intelligence has evolved over the years to include learning system theories comprising of machine, deep learning and expert systems; development of electronic systems for compute including the design of microprocessor and multiprocessor-based systems; embodiment of intelligent systems including robotics, autonomous vehicles, sensory based processing systems; ethics and governance of AI.

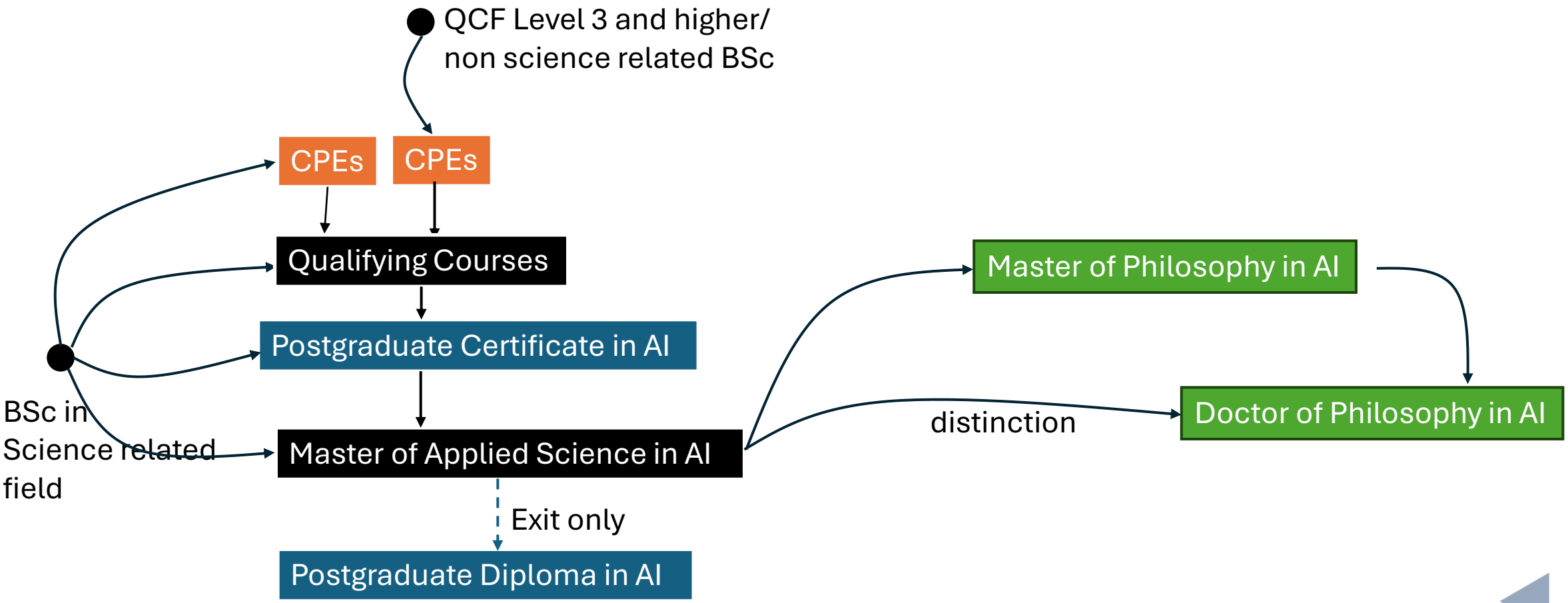
Core						**Transversal**	
Knowledge Representation and Reasoning	Planning, Search & Optimization	Machine Learning	Computational Linguistics	Computational Perception	Robotics, Agents & Integration	AI Services & Human-Machine Interaction	Ethics and Philosophy
Representation of information and knowledge in logic and probabilistic formalisms. Application of automated reasoning methods to the represented information and knowledge	Methods for planning and executing solutions by intelligent systems	Algorithms that improve through experience to identify patterns in data to build models in order to gain valuable information. It includes the processing, analysis and presentation of data	Collection and parsing of text data to generate and understand human languages	Interpretation of data in a manner that is similar to the way humans use their senses to relate to the world around them, mainly through vision and audio processing	Distribution, coordination, cooperation and autonomy of intelligent systems with the environment, as well as the combination of other abilities	Interaction of humans with computers and intelligent machines and technologies that let humans interact with computers in effective ways. Infrastructure and platforms that run AI.	Philosophical and ethical issues associated with AI and related with the compliance of ethical principles and values, including applicable regulation

European Commission's- Joint Research Centre Taxonomy on PG AI programmes

Department of Electrical and Computer Engineering, Faculty of Engineering, UWI, St Augustine

Programme	Duration of Study
UWI Type-8 CPE Certificates (1 credit ea)	*2-4 weeks
Postgraduate Certificate in AI (12 credits)	*1/2 semesters
Master of Applied Science (MASc) in AI	4 semesters full-time 6 semesters part-time
Master of Philosophy in AI (6 credits)	Full-time: min 2yrs, 3yrs max Part-time: min 4yrs, 5yrs max
Doctor of Philosophy in AI (9 credits)	Full-time: min 3yrs, 5yrs max Part-time: min 5yrs, 7yrs max

AI postgraduate Programmes Pathway



Thank you