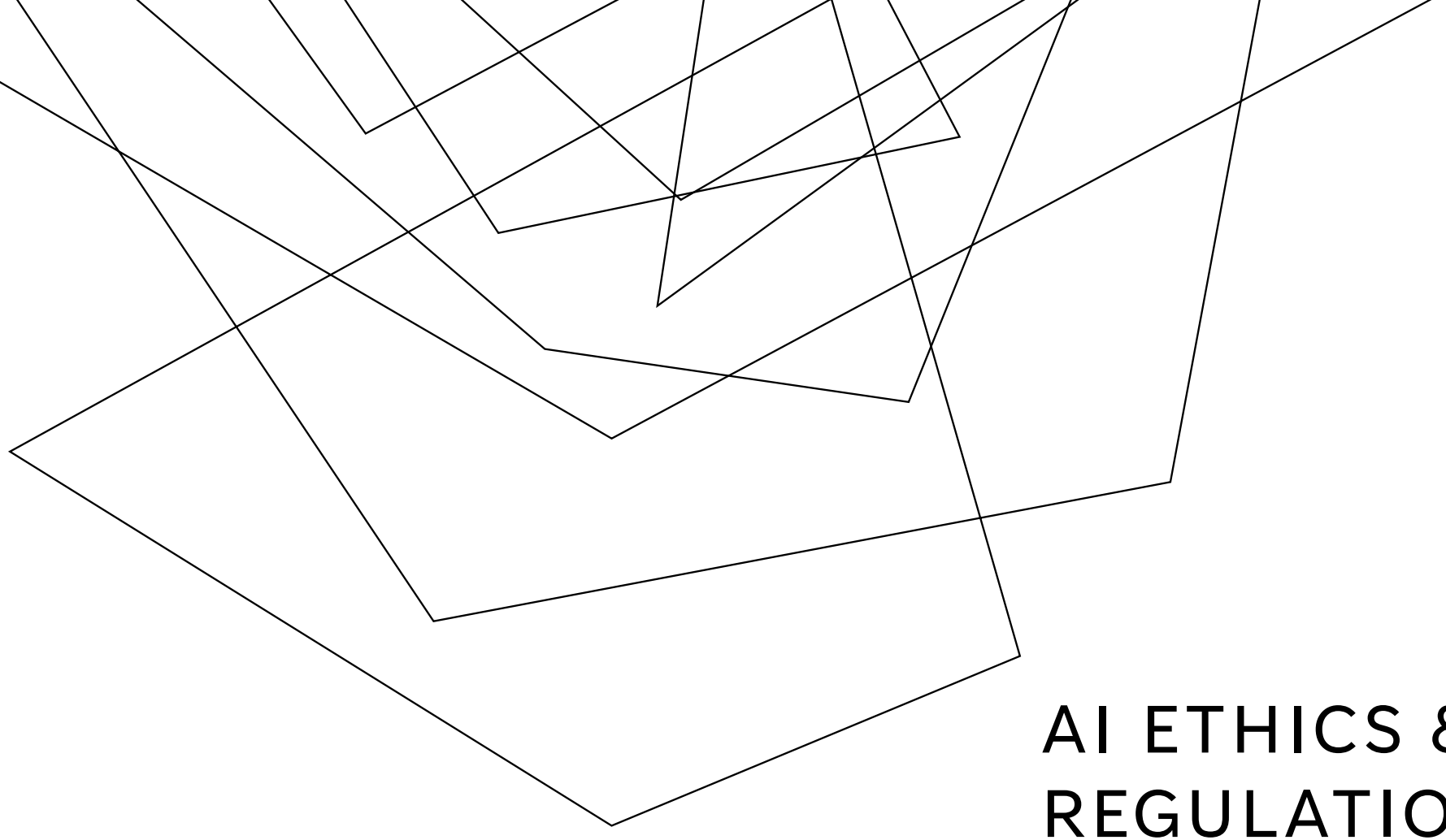

AI ETHICS & REGULATION IN THE CARIBBEAN

Khafra Murray

AREAS OF FOCUS

Ethical Considerations

A discussion on the ethical considerations and impacts, of AI adoption, on citizens and society

Regulatory Approach

Key Factors and activities that come into play for national level facilitation of safe, ethical and value-add AI

ETHICS

Considerations & Impact

- Transparency
- Bias
- Privacy
- Accountability
- Economic displacement
- Attribution

ETHICS: TRANSPARENCY

AI decision making processes are generally invisible to the end consumer,

- how can we understand how the decisions are made?
- What structures do we have in place to evaluate the code in systems that make decisions on our behalf?
- Do the consumers of AI – the general public, and business sectors, know enough of the “how it works” to make informed decisions on consuming AI services?
- Are we using black box AI models or open-source?

ETHICS: BIAS

Are we monitoring for AI bias as part of our consumer protection?

How do we identify and address biases throughout the lifecycle?

- Do we audit Algorithmic coding & Learning Data Sets?
- Are we performing Algorithmic results testing?
- Have we provided mechanisms for consumer-driven bias reporting?

WILL AI-ENABLED SYSTEMS PERPETUATE OR REMOVE BIASES IN THE PROVISION OF PUBLIC AND PRIVATE SERVICES?

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Brookings Institution
Low-Income Families ...

Quicken
Budgeting Tips for Low-Income Fa...

The New York Times
Children From Low-Income Familie...

BBC
Low-income families 'let down' by ...

The Annie E. Casey Foundation
Factors Influencing Housing Decisions ...

Fraser Institute
Federal tax changes increase burden on ...

Top Counseling Schools
Resources for Coping on a Lower Inc...

Prosperity Now
Economic Impact Payments May Ha...

Brookings Institution
Giving Secondary Earners a Tax Bre...

Ms. Magazine
The Power of Unrestricted Cash ...

Heriot-Watt University
Low-income families in Scotland are ...

Route Fifty
Low-Income Families ...

Pew Research Center
Job or Wage Loss Due to COVID-19 ...

Sisters of Charity
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BusinessLine on Campus
Children born into high-income f...

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Getty Images
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Investopedia
Upper Class: Definition, Salary ...

Upside Avenue
More high-income earners choose to rent ...

slate.com
The upper middle class is ruining ...

FORVIS
Roth IRA Strategies for High-Income ...

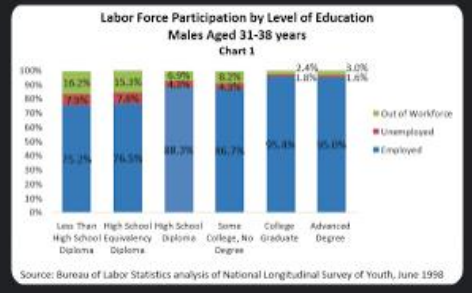
The Hans India
influence child development

DuPage County Divorce Attorney
High Income Child Support Attorney ...

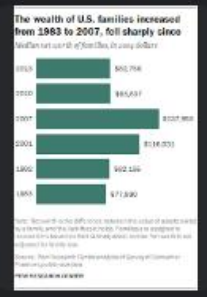
CNBC
How much you have to earn to ...

Hancock Whitney Bank
Life Insurance for High-Income Earners

Pinterest
Parenting hacks



Marripedia
Effects of Family Structure on Income ...



Pew Research Center
Wealth gap betwee...

GOBankingRates
Lifestyle Inflation Can Make You Broke ...

Microsoft Bing

poverty

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How Sikkim Became The Cleanest State, And Is Working Towards Becoming ...

Global poverty is falling, but not as fast as you may think - Humanosphere

How to Overcome a Poverty Mindset | Inspiration and ideas on creating ...

Efforts to Eradicate Poverty in Ghana - The Borgen Project

COVID-19 Could Drive Global Poverty Up for the 1st Time Since 90s

There Are 400 Million More People In Poverty Than Previously Believed ...

Western Visayas' poverty incidence drops to 16.4%

Smart Ways to Tackle Poverty | HuffPost The World Post

UN Kicks Off Tour to Investigate Extreme Poverty and Suffering.. In th...

Human Rights Day 2014: Only holistic approach can eradicate poverty ...

100+ Poverty Pictures | Download Free Images on Unsplash

How To Eliminate Extreme Poverty In 169 Not-So-Easy Steps | KUOW News ...

Poverty, Photo By Amit Vakil, Amazon.in presents 'India Through My Lens ...

Covid Condemns Billions to Poverty for a Decade: Oxfam

What is Poverty - Two Way Out

ETHICS: PRIVACY

AI systems can collect and analyze vast amounts of data,

- Is personal data being used to train AI?
- Has that personal data processing been consented to by the individual?
- Do we have any mechanism for examining inputs to protect individuals?
- What laws, regulations, standards are in place to manage the use of personal data in AI training and Service provision?

ETHICS: ACCOUNTABILITY

Autonomous AI systems can make decisions without human intervention, when something goes wrong:

- Who is responsible?
- Who is accountable?
- Who provides redress?
- Who makes sure this does not happen again?
- Given the cross jurisdictional nature of systems, can we hold anyone legally accountable?

CASE: APPLE CARD (2019)

"Apple and Goldman Sachs were involved in alleged gender discrimination in credit card limits caused by biased algorithms powering Apple Card's credit lending decisioning process. There was widespread social media instances confirming this discrimination, including Apple's very own co-founder, Steve Wozniak and his spouse.

The primary issue here is with the **Black Box algorithm** that generated Apple's credit lending decisions. As laid out in the Twitter thread, **Apple Card's customer service reps were rendered powerless to the algorithm's decision. Not only did they have no insight into why certain decisions were made, they were they unable to override it."**

Bias and the Apple Card: What it Means for our AI Future (teradata.com)

WHAT ETHICAL PRINCIPLES WERE USED INTO CREATING THIS SYSTEM?

IF IT WERE ANOTHER LESS VISIBLE COMPANY, OR WAS PROVIDED AS A SERVICE TO LESS SAVVY USERS, WOULD THIS HAVE GOTTEN PUBLIC ATTENTION?

ETHICS: ECONOMIC DISPLACEMENT

AI has the potential to automate many jobs both high and low skilled, which could lead to job displacement and economic inequality.

- How do we protect workers from the erosion of employment opptunities? Will it be evolution or revolution in the job market?
- AI pays no taxes, how would such a shift in individual income earnings affect tax income by governments over time?
- Extra-regional AI services are effectively off-shoring labour with the associated economic ills

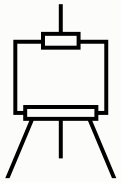
Are we creating economic potholes in Public and Private sector income for the succeeding generations?

"ACCORDING TO OUR ESTIMATE, 47 PERCENT OF TOTAL US EMPLOYMENT IS IN THE HIGH-RISK CATEGORY, MEANING THAT ASSOCIATED OCCUPATIONS ARE POTENTIALLY AUTOMATABLE OVER SOME UNSPECIFIED NUMBER OF YEARS, PERHAPS A DECADE OR TWO. "

- THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION? - CARL BENEDIKT FREY† AND MICHAEL A. OSBORNE, 2013

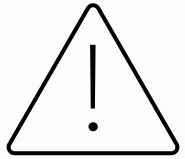
ETHICS: CONTENT ATTRIBUTION

Ownership



How do we protect the outputs of AI systems under copyright laws

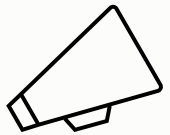
Misuse



AI generated content for malicious use.

e.g. scams, extortion

Disclosure



Under what circumstances or criteria must we disclose AI was used to generate content

Fake Pentagon explosion photo caused a real dip in the stock market

Authorities confirm the suspected AI image is fake.

By Cecily Mauran on May 22, 2023

The image is fake but the consequences are real. Credit: Getty Images

https://mashable.com/article/ai-deepfake-image-pentagon-explosion-hoax

THE DIFFERENCE BETWEEN A SAFE TOOL AND A HARMFUL ONE IS THE USER.

Do regional laws offer recourse?

REGULATION

A Path to Effective Governance

- Trust as an enabler
- Involving Stakeholders
- Public Sector Role
- Private Sector Role
- Structured Governance

REGULATION: TRUST IS A CORE ENABLER

Consumers of AI systems and services need to be able to trust that:

- These systems add value
- Their interactions are protected
- Data is accurate, consented and protected
- Decisions made are consistent fair, equitable and non-discriminatory
- They are not excluded in a manner that robs them of representation or rights
- There is visibility into how information, and interactions are being processed
- In the event of a harmful outcome, there is recourse to right the wrongs

Trust facilitates uptake, uptake facilitates growth of supporting services, diversification of skills, improved economic efficiency

REGULATION: TRUST IN EXISTING SYSTEMS

The Financial System

- Facilitates & influences large areas of economic activity
- Failure = Large impact on a large number of people
- Used by all sectors of the economy and across jurisdictions

How have we made this safe?

- Governments (Local, foreign) enact laws and regulations
- Independent State Agencies monitor, investigate & report
  - SEC,
  - Financial Services Ombudsman,
  - Central Banks,
- Industry Certifiers for transactions – PCI, SWIFT
- Open accounting standards – GAAP, FRIS
- Organisational requirement of employees – training, background checks
- Consumers/Citizens – Report irregularities
- Internal Auditors
- External Auditors

REGULATION: INVOLVING STAKEHOLDERS

Creation of Governance Bodies & Frameworks

- Regional, Public & Private sector committees on National AI Policies and Programmes
  - Includes representatives from government, major industries, human right advocacy groups, etc
  - Informs & advise the executive branch
  - Inputs into legislative changes
  - Prevent siloes of information and efforts
  - Collective examination of impact of non-regional AI systems on society and economy
- Intra-governmental workflows to ensure timeline actions on maintaining an ethical and effective AI systems lifecycle

Transparency & Public Education

- Public access to AI oversight effectiveness via FOIA requests
- Publicly available education and awareness on both public and private sector AI service deployments
- Public AI Awareness and education on safe use and consumption

REGULATION: PUBLIC SECTOR ROLE

Development of / Amendments to Legislation

- AI Legislation
  - Opportunity exists to harmonize legislation regionally, to make regionally developed AI services ethically-consistent and easier to export
- Data Protection/Privacy
- Computer Misuse
- Discrimination / Equal Opportunity
- Consumer Rights
- Intellectual Property / Copyright
- Financial Industry
  - e.g. along with audited financials, companies must have independent attestation that AI Financial systems are providing accurate results, that attestation report and related working papers should be retained similarly

REGULATION: PUBLIC SECTOR ROLE

Development & Adoption of Frameworks

- AI Principles of Ethics
- AI System Stakeholder identification
- AI Consultative Process for impacted stakeholders
- AI Systems Development Lifecycle
- AI Implementation
- AI Systems Certification
- AI Measurement, Metrics & Evaluation
- AI Compliance
- **ISO/IEC 23053:2022 -** Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML)

Enact / Empower Agencies

- Auditor General
- Standards Bureaus (setting national standards for AI systems, ISO/IEC 23053:2022)
- Agencies designated for Privacy & Data Protection
- Agencies responsible for public sector IT
  - Oversight and guidance on public sector AI projects
- Agencies that can act as independent certifiers of agreed AI Principles and standards

REGULATION: DEFINING ETHICAL AI PRINCIPLES

A code of ethical principles defines the guidelines for instructing both producers/developers and consumers to operate in a manner that is honest and beneficial to all stakeholders involved.

e.g. EU AI Ethics Guidelines list seven key requirements that AI systems should meet in order to be trustworthy:

- Human agency and oversight
- Technical robustness and safety
- Privacy and Data governance
- Transparency
- Diversity, non-discrimination and fairness
- Societal and environmental well-being
- Accountability

https://ec.europa.eu/futurium/en/ai-alliance-consultation.1.html

REGULATION: PRIVATE SECTOR ROLE

Industry

- Participate in Governance structures at the national and industry levels
- Encourage local Auditing firms to develop & provide AI Systems Audits
- Encourage consulting and training firms to improve capability of organizations to ethically implement AI
- Invest in startups and incubator programmes creating ethical and value-add AI services

Education

- Development of educational paths and scholarships through the University of the West Indies for AI-related study
  - Development,
  - Management,
  - Maintenance, and
  - Auditing of AI
- Local and regional academic research to examine our experiences and issues with AI systems

Labour Representation

- Participate in Governance structures at the national and industry levels
- Monitor for labour rights violations e.g in Human Resources AI system decisions

HOW DO WE GET THERE: STRUCTURED GOVERNANCE

PLAN	DO	CHECK	ACT
Define Structures Identify Stakeholders Define Principles Define Objectives Incorporate necessary changes informed by the ongoing process	Agencies Legislation & Regulation Frameworks Policies Partnerships Education & Awareness	Certifications Assessments Audits Measurements & Metrics Public Feedback & Issues	Improvements Risk Mitigations Prosecution

(Experience over time improves planning)

ADDITIONAL REFERENCES

AI Principles of Ethics

European Union - https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai
Meta - https://ai.meta.com/blog/facebooks-five-pillars-of-responsible-ai/
Google - https://ai.google/responsibility/principles/

National AI Regulation & Strategies

Canada - The Pan-Canadian AI Strategy - https://cifar.ca/ai/
China - https://www.pwccn.com/en/tmt/interim-measures-for-generative-ai-services-implemented-aug2023.pdf
Germany - https://www.din.de/resource/blob/772610/e96c34dd6b12900ea75b460538805349/normungsroadmap-en-data.pdf
USA – (draft) https://www.whitehouse.gov/wp-content/uploads/2020/01/Draft-OMB-Memo-on-Regulation-of-AI-1-7-19.pdf
USA – AI Bill of Rights https://www.whitehouse.gov/ostp/ai-bill-of-rights/

Other

THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION?*
Carl Benedikt Frey† and Michael A. Osborne, September 17, 2013
https://www.oxfordmartin.ox.ac.uk/downloads/academic/future-of-employment.pdf

THANK YOU

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