5th Gathering of the ParlAmericas Open Parliament Network

Countering Disinformation to Promote Responsible Public Discourse
AI + ETHICS

WHAT IS ARTIFICIAL INTELLIGENCE?
INFORMATION SOCIETY

Society based on an immaterial digital economy

TRANSITION

“data economy explosion”

ALGORITHMIC SOCIETY / DATA DRIVEN SOCIETY

Society assisted by algorithmic decisions based on data
DATA AVAILABILITY + COMPUTING POWER + MATHEMATICAL RESEARCH → ARTIFICIAL INTELLIGENCE CURRENT CYCLE OF GROWTH
Why is it **economically relevant** to control data?

Data is called the "new oil"...

But they are more like a mineral, because they need to be refined and prepared to be usable as "datasets".

AI is the **new electricity** (multi-purpose technology that cuts across all industries).
DATA AS AN STRATEGIC RESOURCE - INTERNET OF THINGS (IOT)
INTERACTION

INTERFACE

DATA

HEALTH
BIOMETRIC

CONSUMPTION
HABITS
PURCHASING POWER

TASTES, HOBBIES
& PREFERENCES

PROFILING
An algorithm is simply a sequence of instructions that a computer carries out to transform input data to output data.

The machine learning model is the relationship between the variables that are calculated based on inputs, outputs, formulas, algorithms and their relative settings.
An **algorithm** is simply a sequence of instructions that a computer carries out to transform input data to output data. Traditional algorithms take an input and some logic in the form of code and gives an output. This output depends upon the steps (codes) described in the algorithm.
*Add water
*Boil pasta
*Prepare tomato sauce
*Add basil
ARTIFICIAL INTELLIGENCE

DEEP LEARNING

FIELD THAT STUDIES HOW ARTIFICIAL SYSTEMS CAN PERFORM INTELLIGENT ACTIONS

MACHINE LEARNING

FIELD OF STUDY THAT GIVES COMPUTERS THE ABILITY TO LEARN WITHOUT BEING EXPLICITLY PROGRAMMED

*Arthur Samuel, 1959

DEEP LEARNING

SUBSET OF M.L. TECHNIQUES THAT USES MULTI-LAYER NEURAL NETWORKS TO LEARN FROM LARGE AMOUNTS OF DATA

GENERATIVE AI

TECHNIQUES WHERE ANN GENERATE NEW INFORMATION FROM TRAINING DATA, FOLLOWING RULES ESTABLISHED BY THE EXISTING INFORMATION
AI + ETHICS

AI IMPACT ON PUBLIC DISCOURSE
DATA  \[\rightarrow\]  AI  \[\rightarrow\]  OUTPUT

PAST  \[\rightarrow\]  \[\rightarrow\]  FUTURE

BIAS = TRASPOSITION
TRANSPARENCY
SCALABILITY = AMPLIFICATION

PREDICT
CLASSIFY
GENERATE

FILTER BUBBLES
ECHO CHAMBERS

DISINFORMATION “SYNTHETIC MEDIA”
WHAT CAN BE GENERATED BY AI?

- NEWS ARTICLES
- FACES
- SCRIPTS
- BOOKS
- PAINTINGS
- MUSIC
- VIDEOGAME ASSETS
- ENHANCE IMAGES
- BUILDING DATASETS FOR OTHER AI’s

SYNTHETIC MEDIA
CREATE INFORMATION THAT MIMICS THE STATISTICAL DISTRIBUTION FROM THE TRAINING DATASET
These Cats Do Not Exist

Learn More: Generating Cats with StyleGAN on AWS SageMaker
GAN’s ARCHITECTURE

DISCRIMINATOR

+ 

GENERATOR

COMPETITIVE ITERATION

TRY TO DISCERN BETWEEN TRAINING DATA AND SYNTHETIC DATA CREATED BY THE GENERATOR

LEARN THE PROBABILITY DISTRIBUTION OF THE INPUT DATA TO MIMIC IT
AI Creates Fake Obama

Videos of Barack Obama made from existing audio, video of him

By Charles O. Choi

TECHNO-SOLIPSISM:

FAKE-NEWS & SYNTHETIC MEDIA

Disinformation...how can we differentiate what is real?
“DANGER OF AI

"WHAT we **really** should be **fearing** from **AI**”

90s movies: AI might kill us all in the future!
REAL “RISE OF THE MACHINES”:

- BIAS
- FUTURE OF WORK
- TECHNO-SOLIPSISM
- SURVEILLANCE
- LACK OF TRANSPARENCY
- CENSORSHIP
- ALGORITHMIC DISCRIMINATION/UNEQUALITY
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<td>AI = NEW ELECTRICITY</td>
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1. ALGORITHMIC AWARENESS
2. PERVERSIVENESS & SCALABILITY
3. BIAS // IN DATA & IN MODELS
4. OPACITY / TRANSPARENCY
5. ACCOUNTABILITY
6. EXPLAINABILITY / INTERPRETABILITY
7. INCLUSION / FAIRNESS

REGULATING ARTIFICIAL INTELLIGENCE

MULTIDIMENSIONAL FRAMEWORK FOR A.I. ETHICS
REGULATING ARTIFICIAL INTELLIGENCE

A I ERRO RS IMPA CT SO CIETY 
AND I NDI VI DUALS AT SCALE = 
AFFECTING HUMAN RIGHTS

DO'S AND DON'Ts:
- NO MAGIC AI SOLUTIONS
- SOCIAL IMPACT: GOOD INTENTIONS, BAD POLICIES
- KNOWING THE STATE OF THE ART: CONTEXT & AI
- AREAS OF “NO IMPLEMENTATION”

AI ERRORS IMPACT SOCIETY 
AND INDIVIDUALS AT SCALE = 
AFFECTING HUMAN RIGHTS

MATRIX ON WHEN TO IMPLEMENT AUTOMATION:
- RELEVANCE OF DECISION/ IMPACT SOCIETY
- COMPLEXITY: “ONE SECOND RULE”
- MODEL INTERPRETABILITY / TRANSPARENCY

The New York Times

San Francisco Bans Facial Recognition Technology

Attendees interacting with a facial recognition demonstration at this year’s CES in Las Vegas.
Joe Buglewicz for The New York Times
REGULATING ARTIFICIAL INTELLIGENCE

- DATA PROTECTION REGULATIONS
- INTELLECTUAL PROPERTY
- AI ETHICS PRINCIPLES & HUMAN RIGHTS
- CONSUMER PROTECTION LAW

RELEVANT LEGAL FRAMEWORKS FOR ARTIFICIAL INTELLIGENCE
EU High-level Expert Group on Artificial Intelligence

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

“Trustworthy AI”
THANK YOU!

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