EDUCATION & WORKFORCE DEVELOPMENT RELATED TO ARTIFICIAL INTELLIGENCE (AI)

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Highlights

- Understanding the broader ecosystem around AI
- Application Example: Pandemic Response
- Educational needs in workforce

https://www.eschoolnews.com/

http://www.infiniteinformationtechnology.com
BROADER AI ECOSYSTEM

**Layers of Learning & Reasoning**

- Simple “if:then”
- Machine Learning
  - computational statistics
- Deep Learning
  - sophisticated, hierarchical pattern matching

**Application**

- Health
  - Forestry
  - Aquaculture
  - Climate
  - Clean energy
  - Military
  - Cybersecurity
  - Government
  - Video games
  - Audit/Ledger
  - Technologies
  - Other……..

- Sensor Data (perception)
- Artificial Intelligence
- Responder Robotics (action)
- Brain (Learning & Reasoning)
- Application (use case)
APPLICATION EXAMPLE: AI- ENABLED PANDEMIC RESPONSE

• **Testing (Link tests to big data real time)**
  - Biosensors for Virus detection
  - Sensors for Antibody detection
  - Devices for sample collection

• **Drugs & Equipment (Select and scale-up with AI help)**
  - Reusable antiviral PPE
  - Vaccines
  - Drugs

• **Contact Tracing, Supply Chain (Leverage existing AI)**
  - Hot-spots and Contacts
  - Hospitals & Workers
  - Supply chain: Equipment & PPE
WORKFORCE EDUCATION NEEDS

**IMMEDIATE:**
AI professionals need better understanding of application
Application professionals need better understanding of AI
  • Create application-specific modules within AI education
  • Should be collaboratively developed by faculty in both areas

**GOING FORWARD:**
Mantra for effective AI education: Cross-disciplinary training
Possible approaches:
  • Application specific AI courses
  • Co-mentored projects
  • Collaborative student teams

Need for critical thinking among AI professionals
Ability to evaluate the credibility of information generated by or manipulated by machines