

# State Administration & Technology Appropriations Subcommittee

Wednesday, January 10, 2024 8:30 AM - 10:00 AM Webster Hall (212 Knott)

**MEETING PACKET** 

# Committee Meeting Notice HOUSE OF REPRESENTATIVES

#### **State Administration & Technology Appropriations Subcommittee**

Start Date and Time: Wednesday, January 10, 2024 08:30 am

End Date and Time: Wednesday, January 10, 2024 10:00 am

**Location:** Webster Hall (212 Knott)

**Duration:** 1.50 hrs

Artificial Intelligence (AI) Presentations and Panel Discussion

Cybersecurity Training and Critical Infrastructure Assessment Update

To submit an electronic appearance form, and for information about attending or testifying at a committee meeting, please see the "Visiting the House" tab at www.myfloridahouse.gov

NOTICE FINALIZED on 01/08/2024 4:00PM by EHP

# State Administration & Technology Appropriation Subcommittee January 10, 2024 Webster Hall (212 Knott Building)

#### **Presenters**

#### **Cybersecurity Updates:**

- Jim Aldrich, Associate Director for Education & Training, Cyber Florida, University of South Florida
- Brian Langley, Senior Executive Advisor, Cyber Florida, University of South Florida
- Melinda Miguel, Florida Chief Inspector General, Executive Office of the Governor

#### **Artificial Intelligence:**

- David Clark, Florida Technology Council
- Brian Fonseca, Director, Jack D. Gordon Institute for Public Policy, Florida International University
- Jimmie Harrell, Chief Information Officer, Department of Revenue
- Jim Zingale, Executive Director, Department of Revenue
- Ann Coffin, Director, Child Support Program, Department of Revenue

Cyber Florida University of South Florida

### Cyber Florida Programming Update

Session 2024
State Administration and Technology Appropriations
Subcommittee
January 10th, 2024



### **Cyber Florida Team**

# **Ernie Ferraresso**Director of Cyber Florida

#### Jim Aldrich

Associate Director for Education and Training

#### **Bryan Langley**

Sr. Executive Advisor, Critical Infrastructure Risk Assessment

#### **James Jacobs**

Associate Director of Partnerships and Policy

## Cyber Florida

Created by the Florida State Legislature in 2014.

The University of South Florida serves as our host institution, but we work with the entire SUS on behalf of the State of Florida.

**Mission:** Help Florida become a national leader in cybersecurity education, academic and practical research, and community outreach and engagement.



# CyberSecureFlorida Training Program

**GOAL:** Train state and local government employees in cybersecurity

The CyberSecureFlorida Training Program Offers:

- Flexible training options: in-person, virtual synchronous, virtual asynchronous, and self-paced.
- Continuous outreach and communications
- Engagement with institutional leadership
- Incentivized training through recognition efforts (digital badges).



# Partner Institutions & Course Offerings

#### Cyber Florida currently offers over 40 courses.

- Cybersecurity Awareness Certificate for Florida State and Local Government Employees
  - This course covers all the topics included in the curriculum of "Cybersecurity Awareness Training" as described in The Local Government Cybersecurity Resource Packet provided by FL[DS].
- Executive Seminar in Cybersecurity Leadership and Strategy for Public Sector Leaders
- Non-Technical Comprehensive Cybersecurity Leadership and Strategy Professional Education Program for Public Sector Leaders and Managers
- Cybersecurity Leadership and Strategy Professional Education Program for Public Sector Leaders and Managers
- CompTIA PenTest + Exam Prep
- CompTIA Security+ Exam Prep
- ISC2 Certified Information Systems Security Professional (CISSP) Exam Prep
- CompTIA Cloud+ Exam Prep
- CompTIA Network+ Exam Prep
- CompTIA Advanced Security Practitioner (CASP+) Exam Prep
- Introduction to AI and Machine Learning for Cybersecurity
- Penetration Testing
- NIST Frameworks and Standards
- Implementing the Risk Management Framework







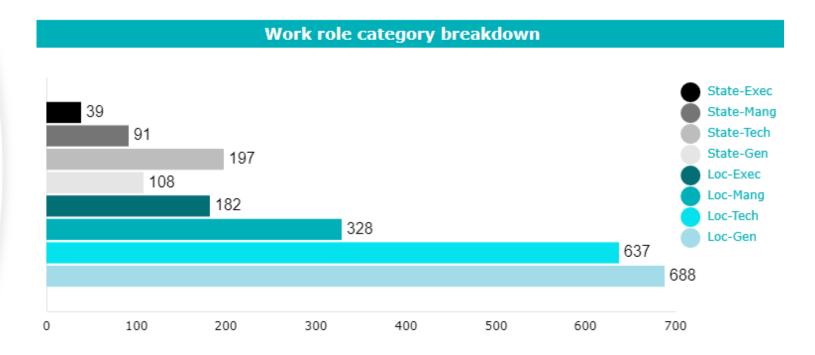
#### Metrics as of 12/31/2023:

**Total Employees Trained** 

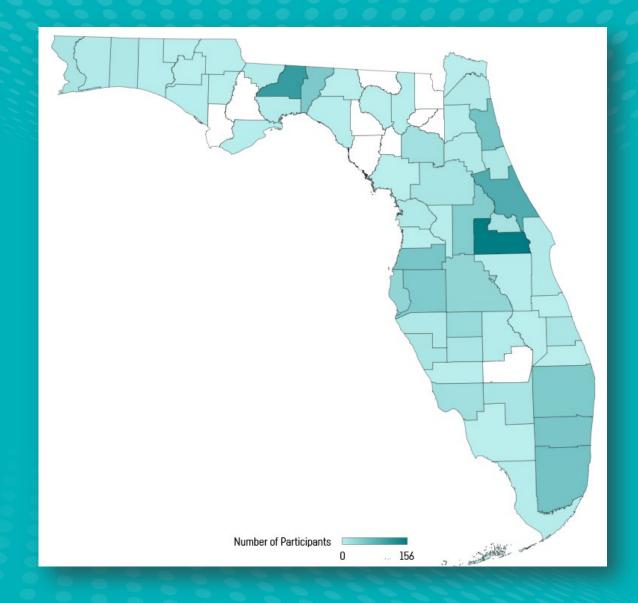
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**Total Course Registrations** 

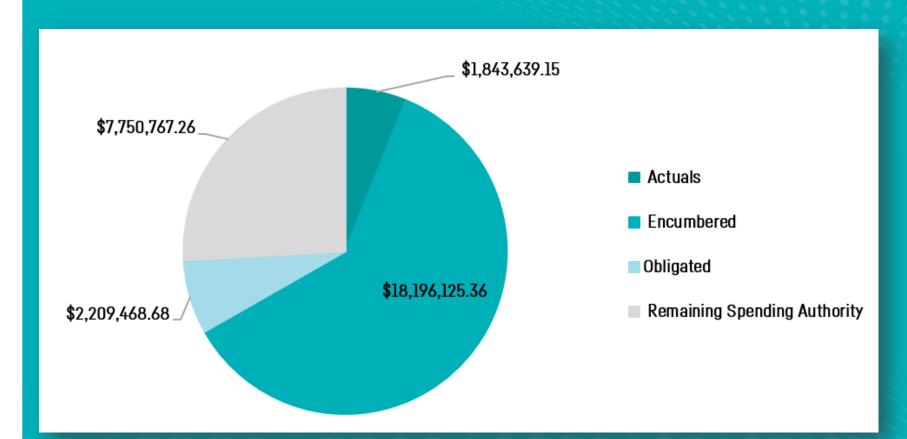
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CyberSecureFlorida
Training programs
now reach 87% of
Florida's counties
(58 out of 67).



### **Distribution of Project Funds**



Encumbered and obligated funds reflect the contracted services of partners and Cyber Florida for providing training through June 2024.

The approx. \$7.7 million remaining will be used to expand course offerings and address program needs as they are identified during that time.

This funding extends to include FY 2024-2025.





# **Critical Infrastructure Risk Assessment**



#### **Highlights of findings**

- Meeting state and federal requirements and guidelines across all 16 sectors, to include government, county, and city to support their cybersecurity efforts and programs.
- Assessment show 7 out of 10 vulnerabilities were Risk
   Management which is an area in need of investment and support. (See chart below)
- 77% of participants meet the Basic Level for Ransomware Readiness.

#### Top 10 Weaknesses Observed Among Florida's CI Providers

Category	Sub-Category	Question	% "Yes" (unweighte )
Identify	Risk Management	Response and recovery planning and testing are conducted with suppliers and third-party providers.	28%
Identify	Risk Management		35%
Identify	Risk Management	Suppliers and third-party partners of information systems, components, and services are identified, prioritized, and assessed using a cyber supply chain risk assessment process.	39%
Identify	Risk Management Strategy	Organizational risk tolerance is determined and clearly expressed.	46%
Identify	Risk Management	Cyber supply chain risk management processes are identified, established, assessed, managed, and agreed to by organizational stakeholders.	43%
Protect	Information Protection Processes and Procedures	Response and recovery plans are tested.	53%
Protect	Information Protection Processes and Procedures	A System Development Life Cycle to manage systems is implemented.	53%
Protect	Data Security	Integrity checking mechanisms are used to verify hardware integrity.	56%
Protect	Information Protection Processes and Procedures	A vulnerability management plan is developed and implemented.	62%
Identify	Risk Management	Contracts with suppliers and third-party partners are used to implement appropriate measures designed to meet the objectives of an organization's cybersecurity program and Cyber Supply Chain Risk Management Plan.	50%
	Identify Identify Identify Identify Identify Protect Protect Protect Protect	Identify Risk Management  Identify Risk Management  Identify Risk Management  Identify Risk Management Strategy  Identify Risk Management Strategy  Identify Risk Management  Information Protection Processes and Procedures  Information Protection Processes and Procedures  Protect Data Security  Information Protection Processes and Procedures  Protect Data Security  Information Protection Processes and Procedures	Identify Risk Management Strategy Cyber supply chain risk assessment processes and Procedures  Protect Processes and Procedures Protect Data Security Information Protection Processes and Procedures Protect Risk Management Data Security Information Protection Processes and Procedures Protect Risk Management Contracts of Protect Data Security Information Protection Processes and Procedures Protect Risk Management Data Security Information Protection Processes and Procedures Protect Risk Management Data Security Information Protection Processes and Procedures Protect Data Security Program and Cyber Supply Chain Risk Data Procedures Processes and Procedures Protect Data Procedures Processes and Procedures Processes Processes Procedures Processes Procedures Processes Procedures Proc

### Recommendations

- Adopt and implement a Florida-Specific Cybersecurity Maturity Model for critical infrastructure providers by the end of 2024.
- Close the maturity gap for "basic" ransomware readiness by the end of 2025.
- Establish 2022 GAA Specific Appropriation 2944B as a recurring program informed by other legislatively mandated efforts.
- Formalize and increase investments in critical infrastructure cybersecurity workforce development across the public and private sectors.
- Continue to expand and mature existing critical infrastructure cybersecurity initiatives.
- Construct and maintain a comprehensive list of critical infrastructure entities operating in the state for sampling and communication purposes.
- Continue to provide cybersecurity risk assessments to Florida's CI providers



### Questions



**Cyber Pathways Program Chief Inspector General** 

# EXECUTIVE OFFICE OF THE GOVERNOR OFFICE OF THE CHIEF INSPECTOR GENERAL



Update on Cyber Pathways Program and Enterprise Audit Activities

The Honorable Ron DeSantis
Governor of Florida

Melinda M. Miguel Chief Inspector General



### **Agenda**

- Discuss Cyber Pathways Program
  - Implementation of Specific Cyber Audits
  - Training and Micro-Learning (Just-In-Time Learning)
  - Enterprise Cybersecurity Audits



### **Created Cyber Pathways Program**

Florida Inspectors General adopted a multi-featured cyber resilience pathways program supported by the Office of the Chief Inspector General. This program creates "pathways" to cyber competency and fulfills expectations associated with amendments to the Florida IG Act in 2021 (HB 1297) that requires specific cyber audit plan (annually in each OIG).

The Cyber Pathways Program equips OIG staff with the fundamentals required to audit, investigate, inspect, and review cybersecurity risk management and cybersecurity operations, and assess agency compliance with government requirements such as NIST and following professional auditing standards.

The Cyber Pathways Program includes the following:

- **1. Training** (Two-hour, one day, two days, one week, certification courses and other training courses) = Est. \$400,000.00
- **2. Tools** (Audit Program with Bi-Weekly Support and other Technical Assistance) = Est. \$300,000.00
- **3. Audit Enablement** (Subject Matter Expertise/Consulting Services) = Est. \$300,000.00



## **Training Investment**

- Introduction to Cyber Fundamentals
- ISACA Certified Information
   Systems Auditor (CISA) certification
   training classes for senior internal
   audit staff.
- ISACA Certified Governance of Enterprise Technology (CGEIT) certification training for senior internal audit staff.
- FBI Cybersecurity Boot Camp Two-Day Training for auditors and investigators
- SkillSets Training Subscription
- Identity and Access Management Training

- IIA CIA Exam Prep
- Anatomy of an Attack
- Introduction to Cloud Computing
- CompTIA Security+
- Introduction to Cybersecurity
   Investigations Training
- Incident Response and Recovery Training
- CSIRT Exercises Observation activities across 34 agencies



# **Technology Related Certifications**

Certification	Certification Holders (Actual #) FY 20-21	Certification Holders (Estimated #) FY 23-24
Certified Information Systems Auditor (CISA)	8	31
Certified in the Governance of Enterprise IT (CGEIT)	0	8
Certified Internal Auditor (CIA)	20	31

Source: Florida Inspectors General Expertise System as of November 30, 2023



# Florida Cybersecurity Standards (FCS) – Rule 60GG-2

The Florida Cybersecurity Standards are based on the NIST Cybersecurity Framework (CSF) and is in sync with the CSF version 1.1

Function Identifier	Function	Category Identifier	Category
ID	Identify	ID.AM	Asset Management
		ID.BE	Business Environment
		ID.GV	Governance
		ID.RA	Risk Assessment
		ID.RM	Risk Management Strategy
		ID.SC	Supply Chain Risk Management
PR	Protect	PR.AC	Identity Management and Access Control
		PR.AT	Awareness and Training
		PR.DS	Data Security
		PR.IP	Information Protection Processes and Procedures
		PR.MA	Maintenance
		PR.PT	Protective Technology
	Detect	DE.AE	Anomalies and Events
DE		DE.CM	Security Continuous Monitoring
		DE.DP	Detection Processes
RS	Respond	RS.RP	Response Planning
		RS.CO	Communications
		RS.AN	Analysis
		RS.MI	Mitigation
		RS.IM	Improvements
RC	Recover	RC.RP	Recovery Planning
		RC.IM	Improvements
		RC.CO	Communications 6

6



### **FY 21-22 Enterprise Audit**

1 - Identify

2 - Protect

3 - Detect

4 - Respond

5 - Recover

#### **Detect**

DE.AE - Anomalies and Events

DE.CM - Security Continuous Monitoring

DE.DP - Detection Processes

#### **DE-CM**

1 - Networking Monitoring

2 - Physical Monitoring

3 - Personal Activity

4 - Detect Malicious Code

5 - Detect Unauthorized Mobile Code

6 - Monitor External Service Providers

7 - Monitor for Unauthorized Personnel, Software, Connections & Devices

8 - Perform Vulnerability Scans as part of SDLC



### **FY 22-23 Enterprise Audit**

1 - Identify

2 - Protect

3 - Detect

4 - Respond

5 - Recover

#### **Protect**

PR.AC - Identity Management and Access Control

PR.AT - Awareness and Training

PR.DS - Data Security

PR.IP - Information Protection Processes and Procedures

PR.MA - Maintenance

**PR.PT - Protective Technology** 

#### PR-AC

- 1 Identities and credentials are managed for authorized devices and users.
- 2 Physical access to assets is managed and protected.
- 3 Remote access is managed.
- 4 Access permissions are managed, incorporating the principles of least privilege and separation of duties.
- 5 Network integrity is protected, incorporating network segregation where appropriate.
- 6 Identities are proofed and bound to credentials and asserted in interactions
- 7 Users, devices, and other assets are authenticated.

-8



### **FY 23-24 Enterprise Audit**

#### Incident Response, Reporting, and Recovery











**Phase 1: Preparation** 

**Phase 2: Detection and Analysis** 

Phase 3: Containment, Eradication, & Recovery

**Phase 4: Post-Incident Activity** 

**Phase 5: Coordination** 



## FY 24/25 Enterprise Audit

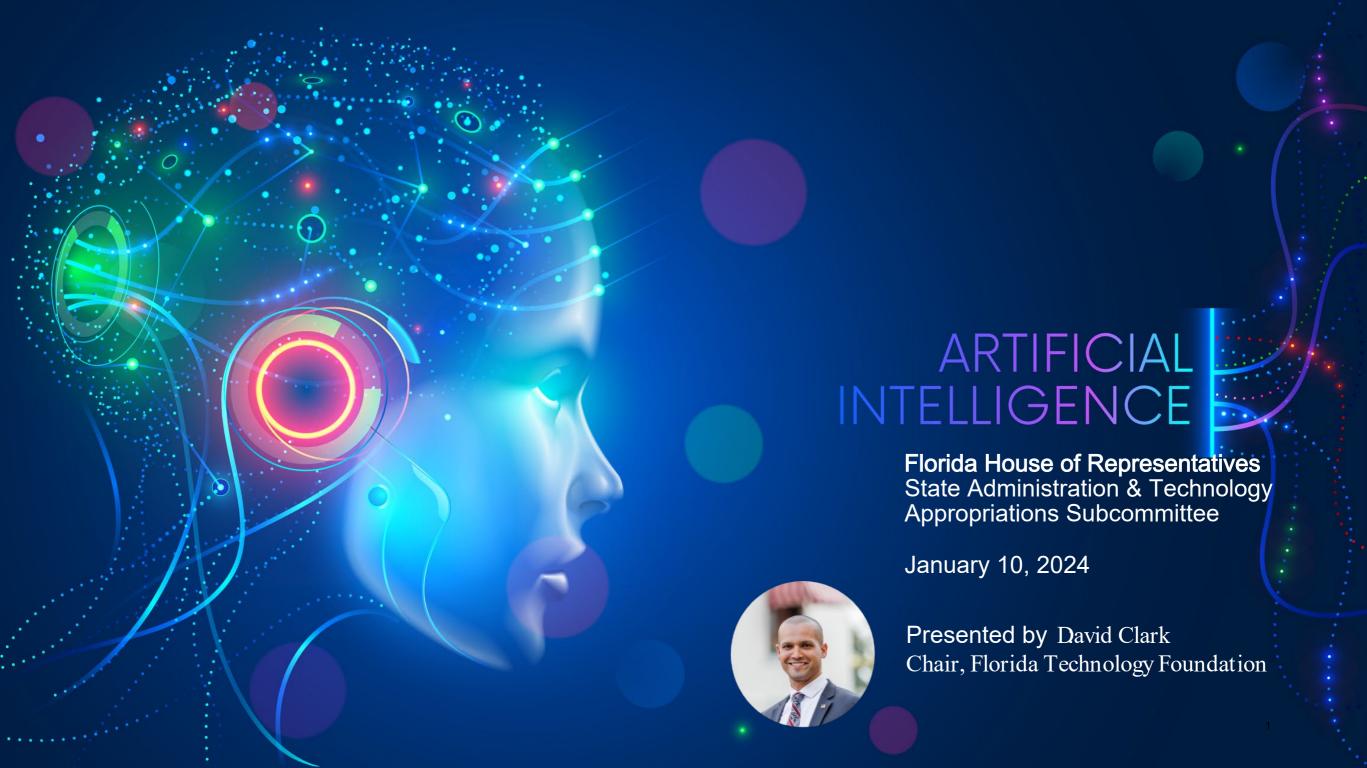
- Audit Topic Selected By January 2024
  - Based on Risk Assessment, Audit Coverage,
     Other Factors
- Create Audit Program with Testing
  - Distribute to CIO/ISM June 2024
- Kick Off Audit for FY 24/25 in July 2024
  - Initiate and Conduct Fieldwork
  - Develop Findings and Recommendations
  - Prepare and Distribute Report
  - Conduct Follow-Up



# **THANK YOU**



AI Florida Technology Council

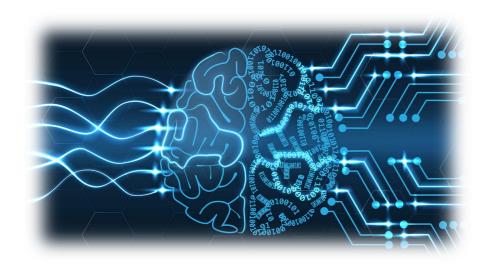


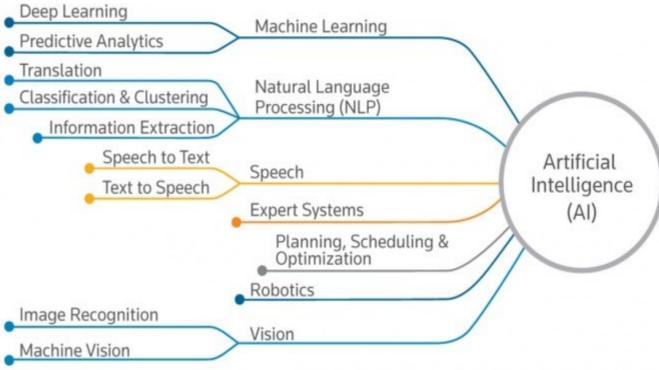
# Artificial Intelligence - What is it?

Science and engineering of making intelligent machines, especially intelligent computer programs with the capability to imitate intelligent human behavior.

Al is a machine's ability to perform the cognitive functions we associate with human minds, such as perceiving, reasoning, learning, interacting with an environment, problem solving,

and even exercising creativity.





# Artificial Intelligence Development History

Alan Turing test if a machine can
exhibit intelligent
behavior
mimicking a
human, then
it has intelligence.

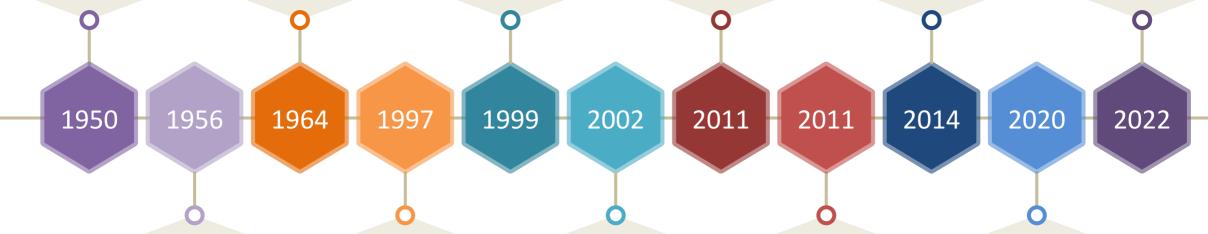
Joseph
Weizenbaum chatbot capable
of holding
conversations
with humans.

Sony launches the first robot pet dog AiBO whose personality and skills develop over time.

Apple integrates into iPhone Siri - intelligent virtual assistant.

Amazon launches Alexa - intelligent virtual assistant that completes shopping tasks.

ChatGPT is available to public testing.



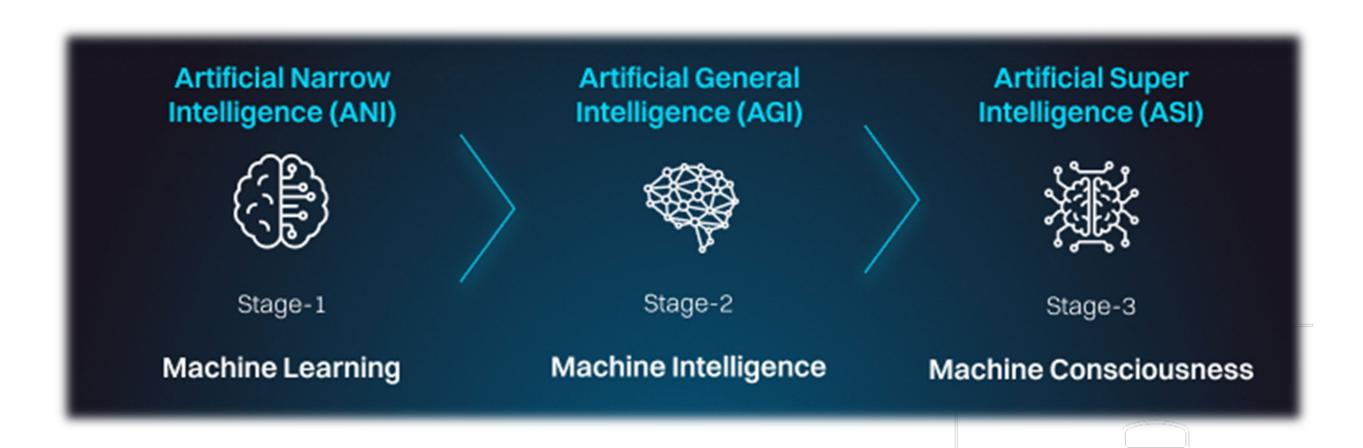
John McCarthy introduces the term 'Artificial Intelligence.'

A chess-playing computer Deep Blue defeats chess champion Garry Kasparov.

The first massproduced robotic vacuum cleaner Roomba learns to navigate homes. Question answering computer Watson wins 1st place on TV show Jeopardy.

GPT-3 tool for automated conversations is introduced

# Stages of Al



# Types of Al

#### **Limited memory** Theory of mind **Reactive AI** Good for simple Can handle complex Able to understand human classification and pattern classification tasks motives and reasoning. recognition tasks Can deliver personal Able to use historical experience to everyone Great for scenarios where data to make predictions based on their motives all parameters are known; Capable of complex

- can beat humans because tasks such as self-driving it can make calculations cars, but still vulnerable much faster to outliers or adversarial Incapable of dealing examples with scenarios including
  - This is the current state of AI, and some say we have hit a wall
- and needs. Able to learn with fewer examples because it understands motive and intent
- Considered the next milestone for Al's evolution

 Human-level intelligence that can bypass our intelligence, too

Self-aware



imperfect information

or requiring historical

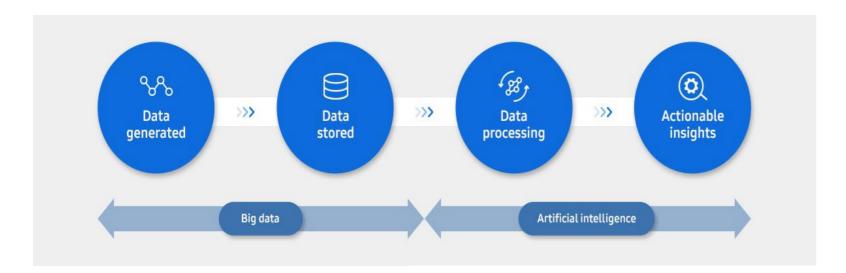
understanding

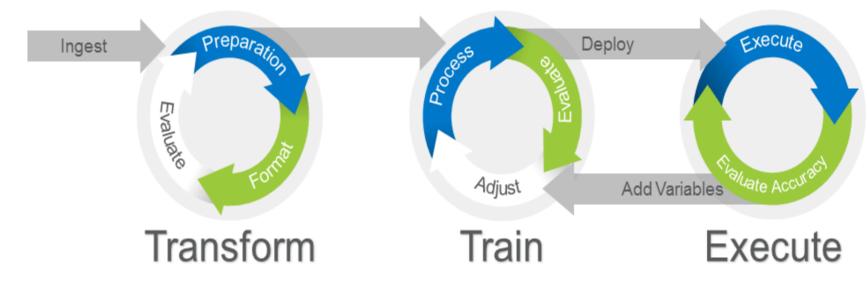






# How Al Works





# Examples of Al

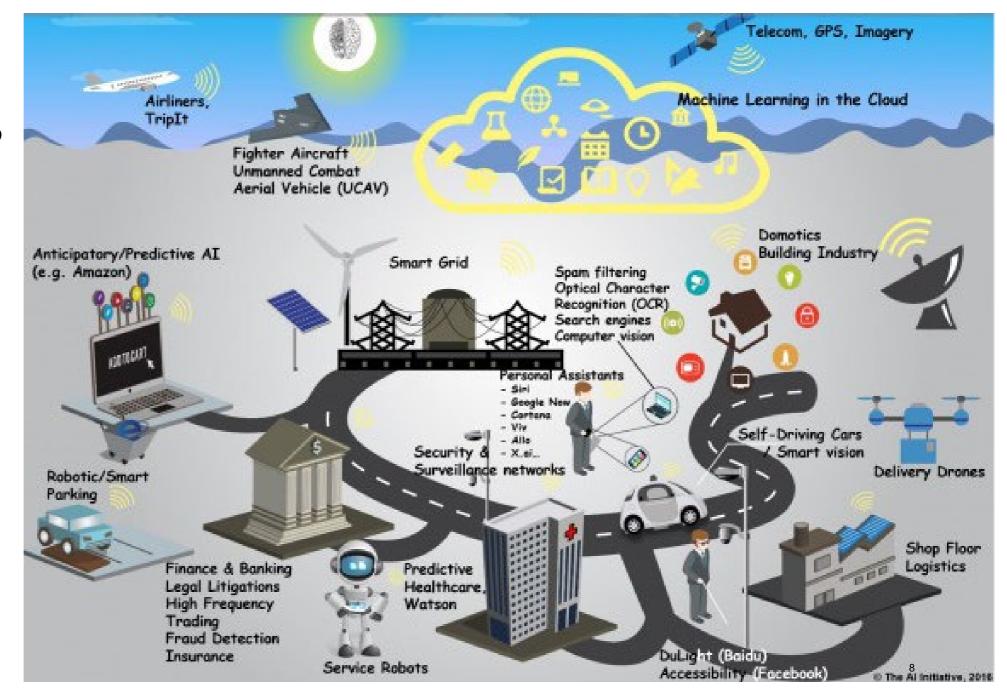
As it stands, 90% of well -known companies invest in AI, and 83% of them think AI will help them maintain or gain a competitive edge.

Manufacturing Robots Disease Mapping Conversation Bots

Smart Assistants Self-Driving Cars Social Media Monitor



# Al in Our Daily Lives



# Al Powered Smart Devices



Smartphones



Media Streaming



**Drones** 



Smart Home & Security



# Al Business



Targeted Marketing



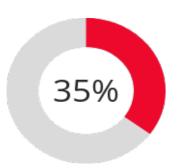
Customer Service and Support



Smart Supply Management



Quality Control and Assurance



Of businesses have already implemented some form of AI in their workplace.

McKinsey predicts AI will ADD \$13
Trillion to the global economy by
2030



# Good or Something Else Choose Wisely

As you can see in many ways AI is being used behind the scenes to impact our daily lives and it will continue to benefit our modern society.

However, along with good, negative consequences will arrive. The sooner governance is address regarding the opportunities and challenges involved in AI, the better equipped society will be to appropriately leverage the many lifechanging positives and mitigate and manage the negative outcomes.



### Now What?

We have a choice to be engaged and involved. It is here and cannot be ignored.

Smart governance of the entities and people who develop and control the Al systems.

The future we create is ours and how we develop and govern the technologies around us, especially AI, will determine the future we and our children live in.





AI Gordon Institute for Public Policy, FIU



Brian Fonseca
Director, Jack D. Gordon Institute for Public Policy
Executive Director, Cybersecurity@FIU

**January 10, 2024** 



### **Public Sector Adoption**

Policymakers should consider legislation that guides how to best implement Al technologies that enhance public services, improve efficiencies, and reduce costs.

- ☐ Discussions on funding
- ☐ Partnerships with technology companies
- ☐ Ensuring equitable access to improved services



# **Economic Impact and Workforce Transformation**

Policymakers should consider legislation that inform strategies to manage the economic shifts caused by AI.

- Workforce retraining
- Boost education and research
- ☐ Support sectors most at-risk



### Ethical Use and Regulation of Al

Policymakers should consider legislation that establishes ethical guidelines and regulatory guardrails to ensure responsible use.

- Combat misinformation
- ☐ Purge algorithmic and computational biases
- ☐ Protect privacy and civil rights



AI Department of Revenue



# Department of Revenue Technology Automation Projects

January 10, 2024





### **Objectives**

- Describe virtual assistant use and proposed expansion
- Highlight current and possible future automation and artificial intelligence projects





# **Artificial Intelligence Spectrum of Ability**



#### **Rules-Based Automation**

- Automate repetitive actions
- Simple assistant
- No learning

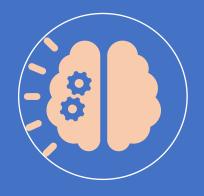




#### Logic-Based Automation

- Virtual assistants
- Natural language dialog
- If-Then automation
- Limited learning

Systems that THINK



#### Adaptive Automation

- Cognitive computing
- Natural language processing
- Learns continuously and autonomously

Systems that LEARN



# **Child Support Virtual Assistant**

- DORA Department of Revenue Answers
- Conversational Artificial Intelligence Platform
- Answers over 200 non-case specific questions on a variety of topics
- Available on 19 public webpages



en you establish paternity, you identify the legal father of the child. other, the father and the child.

#### hild are:

y or her father :ificate arent, if available support and medical

fits, military allowances



Genetic testing identifies a child's biological father.

LEARN MORE >

#### ht to:

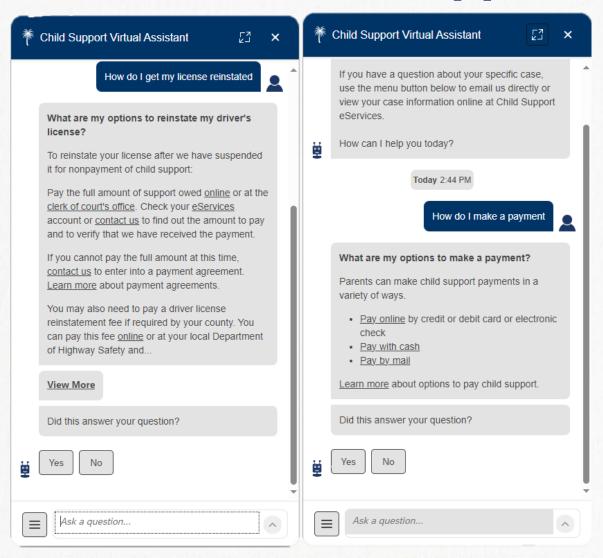
h the child

ied to each other has a legal father. Married parents and their

Have a question about genetic testing?



### **Child Support Virtual Assistant**



- Revenue staff create the content, not the platform
- Revenue staff monitor conversations to
  - Identify searched topics to create and improve content
  - Teach the platform when there is a better response available
- The platform uses both staff monitoring and customer feedback to improve responses to similar questions in the future
- DORA offers three possible responses if no assigned response is available
- 50 interactions daily, with average of 2.5 questions with each interaction



# Virtual Assistant Expansion

- Legislative Budget Request
  - \$125,127 recurring (and \$215,978 nonrecurring)
- General Tax public webpages
- Financial Management employee-facing virtual assistant to assist with payroll, vendor payments, purchasing, and similar topics
- Revenue's internal information technology Service Desk to assist with common technology questions
- Revenue will have one solution used by all programs and will be scalable with different knowledge bases/libraries



# **Current and Future Automation and AI Projects**

#### **Current**

- Rules-based case processing
- Batch program scheduling, initiation, and monitoring
- Code migration
- Automation of data entry
- Document scanning and processing
- Vulnerability management
- IT system monitoring
- Al utilization policy

#### **Future**

- Expansion of DORA
- Automated application testing
- Automate access management to SAP systems
- Automate external communication with Department customers





# **Questions?**

