Future Workforce Skills
It is YOUR time SHINE

Coding Fiesta 2023

HOSTED BY NORTH CENTRAL FLORIDA AAPC

www.sfcollege.edu
julie.shay@sfcollege.edu
352-395-5024

"You can do what I cannot do. I can do what you cannot do.

TOGETHER, we can do great things."

Mother TheresaTogether

WHY does it all matter?

Objectives

- **Raise awareness on hot topics impacting our profession.**
- **Identify opportunities to upskill and fulfill knowledge gaps to SHINE in your sphere of influence.**
- **Encourage reflection specific to influencing, life learning, and volunteering.**

Trends IMPACTING Industry

Technology

Artificial Intelligence

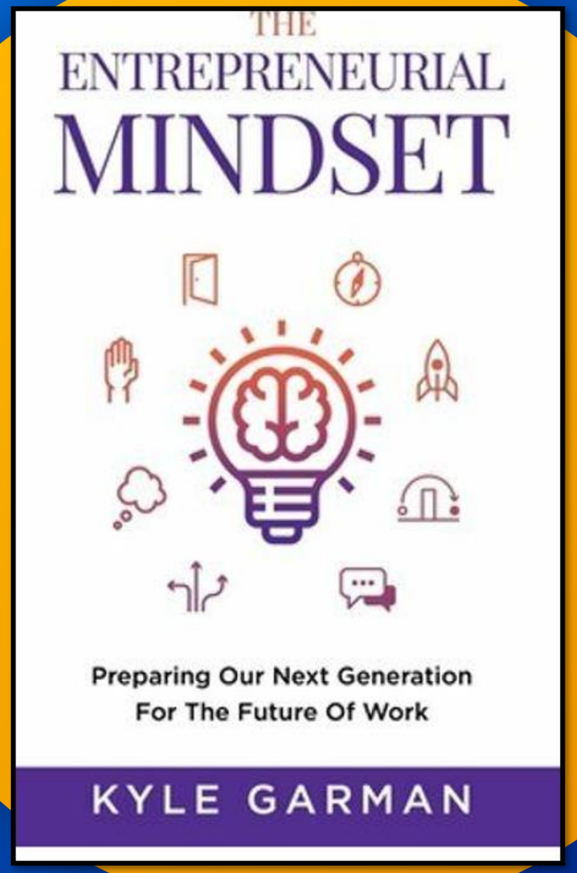
Data Analytics

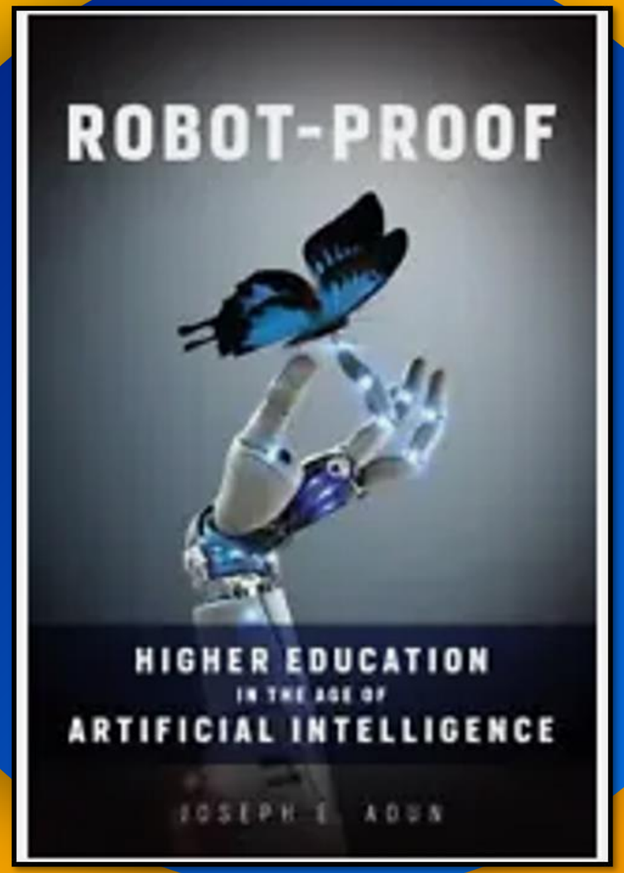
Robotic Process Automation

CyberSecurity

How comfortable are you with any one of these?

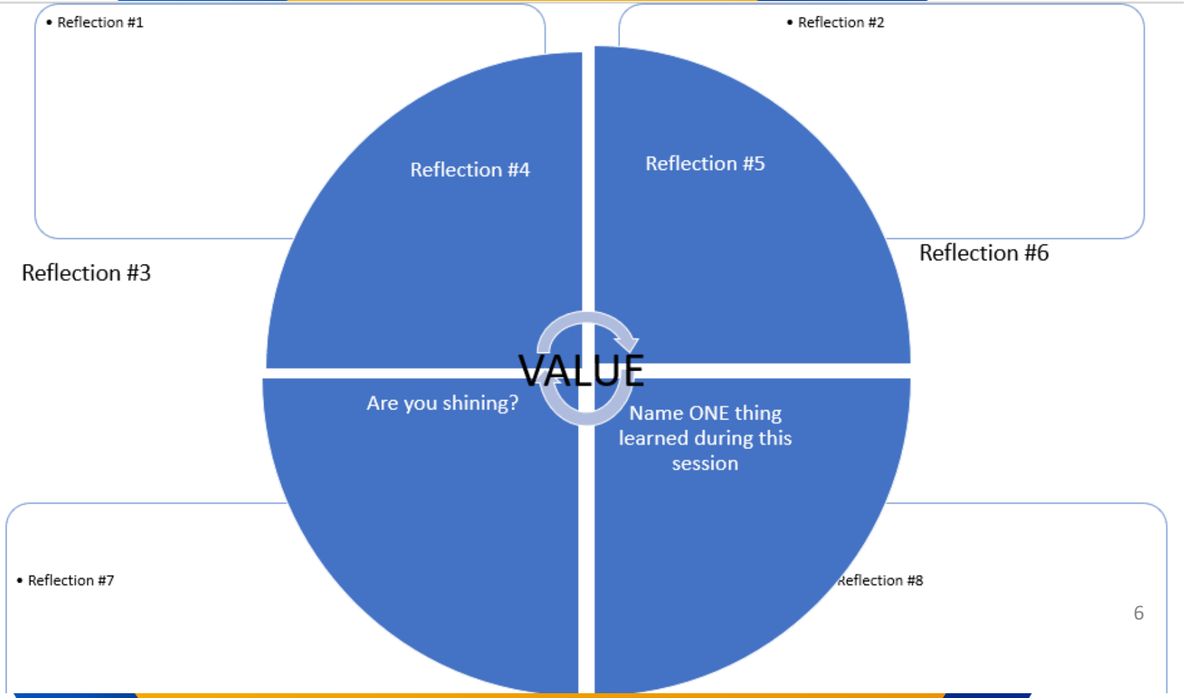
Resources





30+ AI 2023Stats and Facts
AI100Report: Stanford University
2023 Tech forecast: Build a recession proof tech workforce
GAO-21-7SP; AI: Benefits and Challenges of Technologies to Augment Patient Care

Handouts



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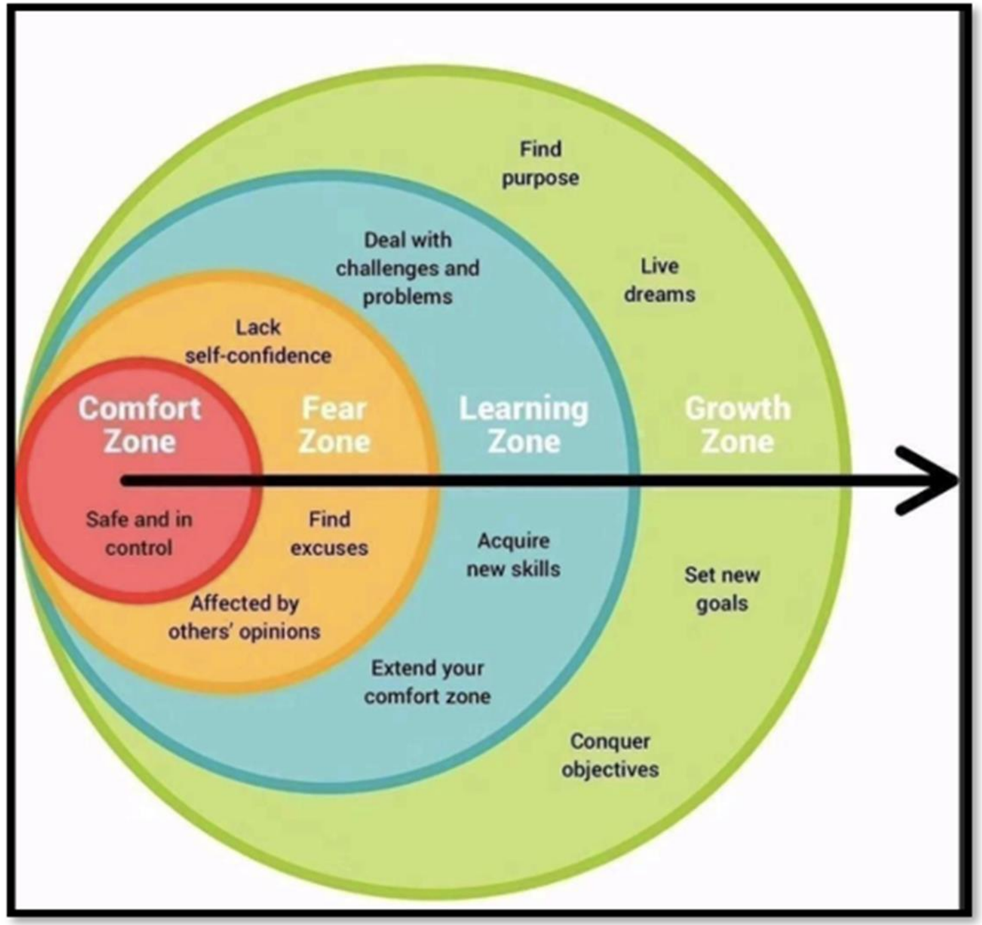
October 28, 2023 – Handout#2 – Skills Gap Analysis

Self-Reflection Checklist	Comfortable	Somewhat comfortable	Not comfortable
Artificial Intelligence			
Analytical Thinking			
Deep Learning			
Data Analytics			
Data management/governance			
Database development			
Excel/formulas/develop virtual representations			
Pivot Tables			
Python			
R and R Studio			
Critical thinking			
Emotional Intelligence – self-awareness, regulation			
Leadership			
Management			
Curiosity or does everything need to be spelled out			
Information literacy			
Compliance			
Cybersecurity			
Technology literacy			
Serving, Volunteering			
Social influence			
Telehealth			
Systems analysis/evaluation			
Security, Privacy			
Complex problem solving			

It is YOUR Time to SHINE and ADD VALUE to ANY organization

Where are you going to be in 10 years?

Technology is here, artificial intelligence is here, and data analytics is here; are you ready? Are you shining?



PwC – 1/3 of U.K jobs at risk of automation by 2030; Robots could take over 38% of current U.S. jobs in the next 15 years.

Source: https://research.udel.edu/2019/09/23/disruptors/

Technology in Healthcare

- The pandemic jumpstarted digitally-enabled care, particularly in telemedicine and virtual health delivery - $15 to $25 billion annually
- Administration: simplifying digital access and patient self-scheduling, optimizing patient portals, using AI for nurse staffing and scheduling and to triage patients to the right venue of care
- Treatments: Computer-aided artificial intelligence, telemedicine, remote patient monitoring, digital therapeutics, augmented reality for chronic pain treatment

unique
radical
destination
significant
disrupt
success
plan
leap
motivation
solution
fundamental
communicate
different
Paradigm Shift
transform
opportunity
evolve
improvement
idea
innovation
rethink
adaptation
way
inspiration
revolution
solve
motivate

Paradigm Shifts

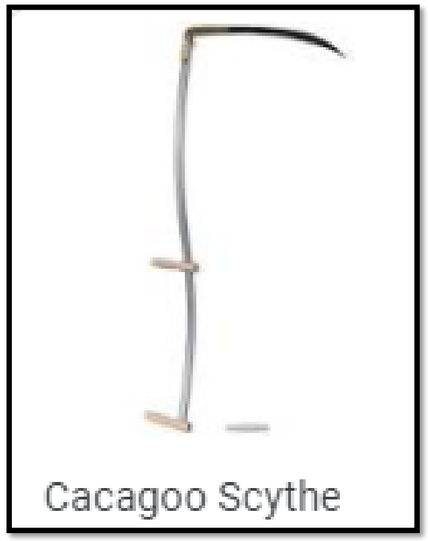
’80’s
Reimbursement
Methodologies

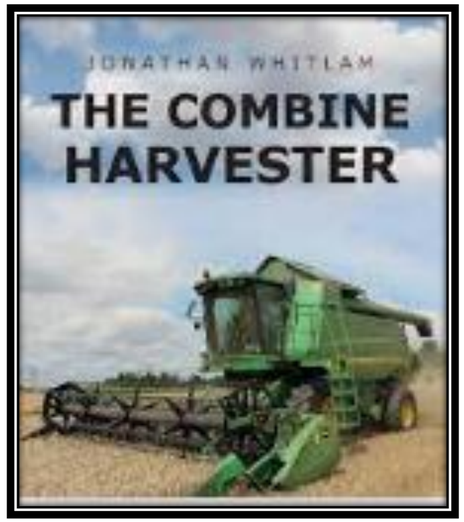
’90’s +
Paper to E H R/
E M R

Current
AI, Robots,
Automation

History is on our side…….

Technology creates more jobs than it destroys, BUT it also leads to employment shifts





Technology

Benefits and Challenges

Enhanced Efficiency and productivity
Cost reduction
Profit boost

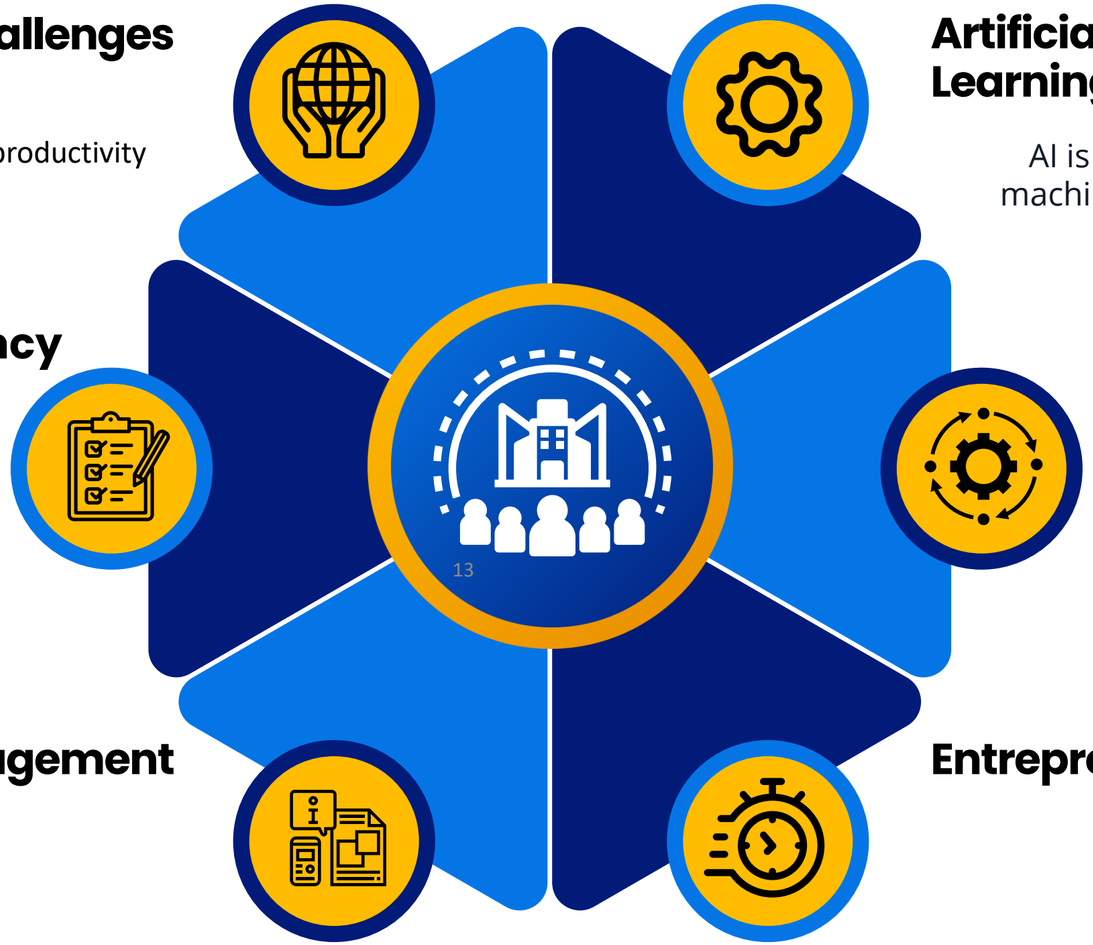
Artificial Intelligence/Machine Learning

AI is a type of computer technology that makes machines "smart." It helps machines perform tasks with human-like intelligence.

Interoperability/Transparency

Ethics

Microsoft Fabric



Robots

Revenue Cycle Management

Entrepreneurship MindSet

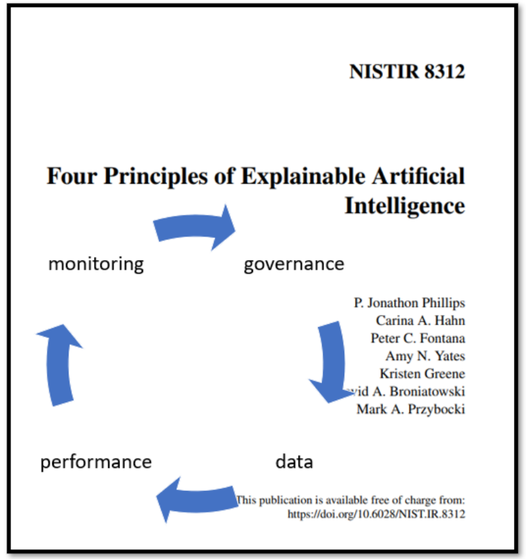
Humanics

Are you embracing technology?

AI and Ethics

AI ethically involves ensuring that the project respects privacy, maintains data security, complies with regulations, and prioritizes the well-being and informed consent of individuals.

Uniting experts: Fed Govt, Industry, Non-profit sectors



Balances of Interest and Values

Promotes Responsibility and Accountability

Ensures fairness and justice

Enhances Public Trust

Mitigates Harm

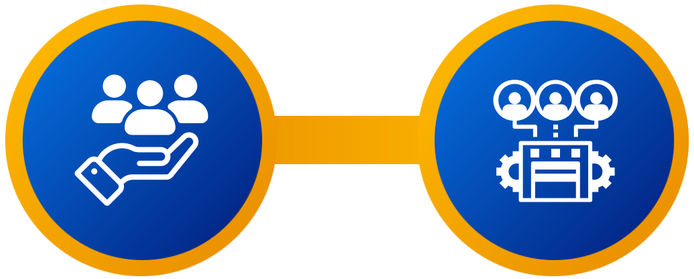
Adapts to Technological Advancements

Top AI Ethics Issues

- Privacy and Surveillance
- Role of Human Judgment
- Human interaction and behavior
- Lack of transparency
- Bias and discrimination
- Legal responsibility
- AI Errors
- Technology reliance
- Unemployment
- Environmental Concerns
- Misuse of AI
- Bias and Discrimination

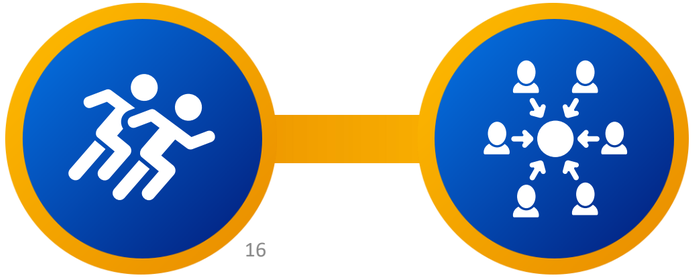
Leaders, Business Owners, Managers, Workers....the questions to ask

Are you paying attention to the foundation and solidifying your current technology, to be able to grow?



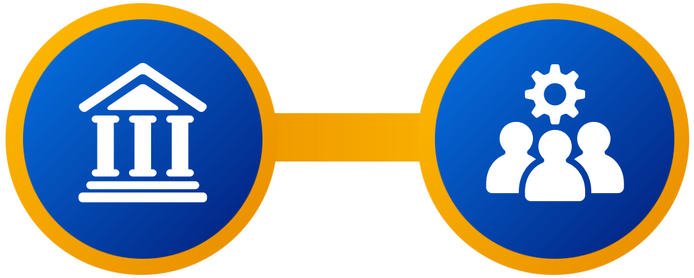
What was the half life of a skill a generation ago???

Are you asking questions and exploring ways to disrupt "business as usual" through new technology?



By 2030, 55% MORE time using technical skills than in 2016. Will there be a net gain in employment through automation?

Are you budgeting for innovation?



Are you taking active steps to harness the staggering power of technology?

Are you having the conversations, pursuing the knowledge, and doing what you can to position your organization to ride the growth of technology?

Reflection #1 - AI, Humanics, ChatGPT

3 TOP Countries

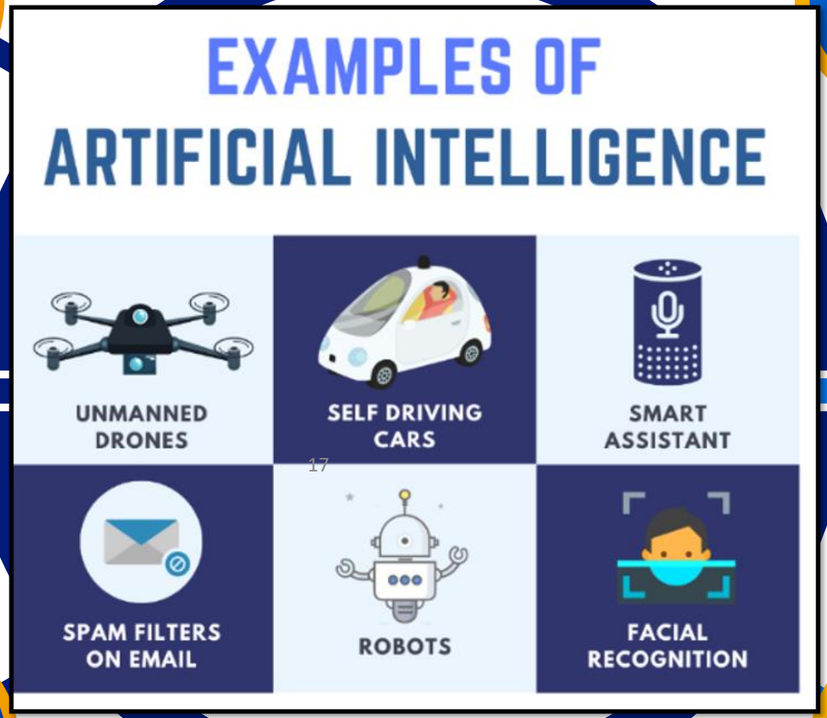
Who are they?

Priorities

- Cybersecurity
- Compliance
- Personal Privacy

Industry Use

Private Sector: 44%
Business - 5%,
Technology 17%



AI

ANI, AGI and ASI

Adding $15.7 T into global economy by 2030

Machine Learning

Algorithms learn from data

Increase productivity

Deep Learning

Artificial neural networks
Accurate conclusions
Facial, voice recognition

Efficiency and 10x Faster

BUSINESS INSIDER · 12h · on MSN

Jobs are now requiring experience with ChatGPT — and they'll pay as much as...

CBS News + Follow

Lawyers fined for filing bogus case law created by ChatGPT

Story by CBSNews • Yesterday 11:44 AM

Large language model

Deep learning algorithm

Neural network

BUSINESS INSIDER · 12h · on MSN

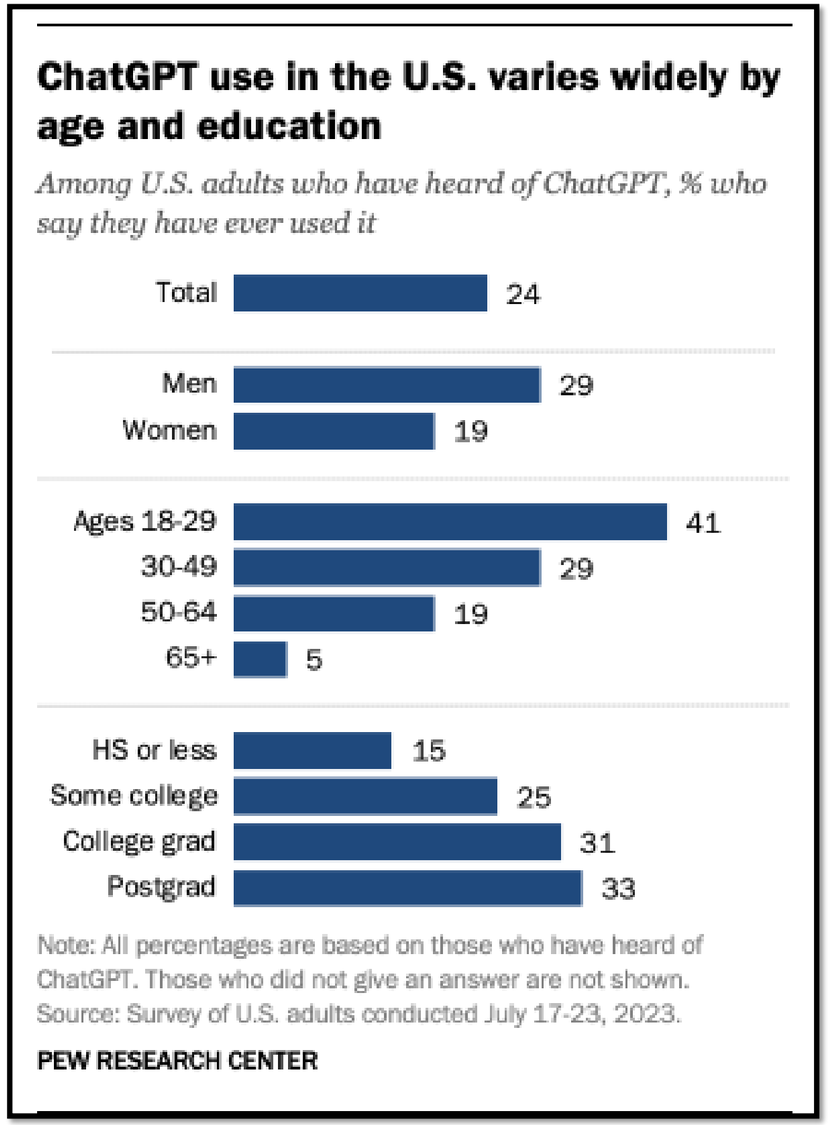
Jobs are now requiring experience with ChatGPT — and they'll pay as much as...

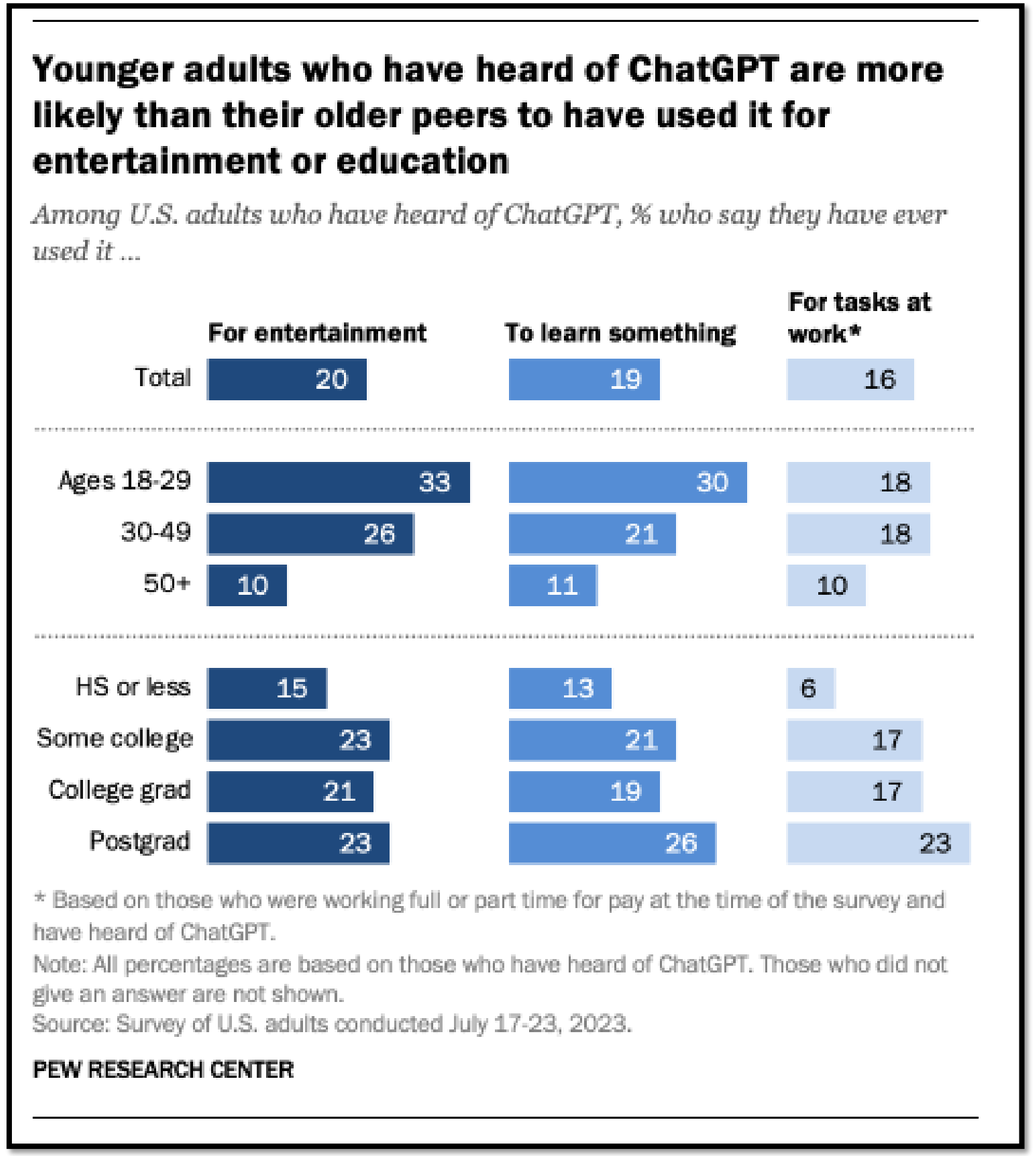
Learns context about any language pattern

A consultant used ChatGPT to free up time so she could focus on pitching clients. She landed $128,000 worth of new contracts in just 3 months.

Aaron Mok May 8, 2023, 11:00 AM EDT

Reflection #1 - AI, Humanics, ChatGPT

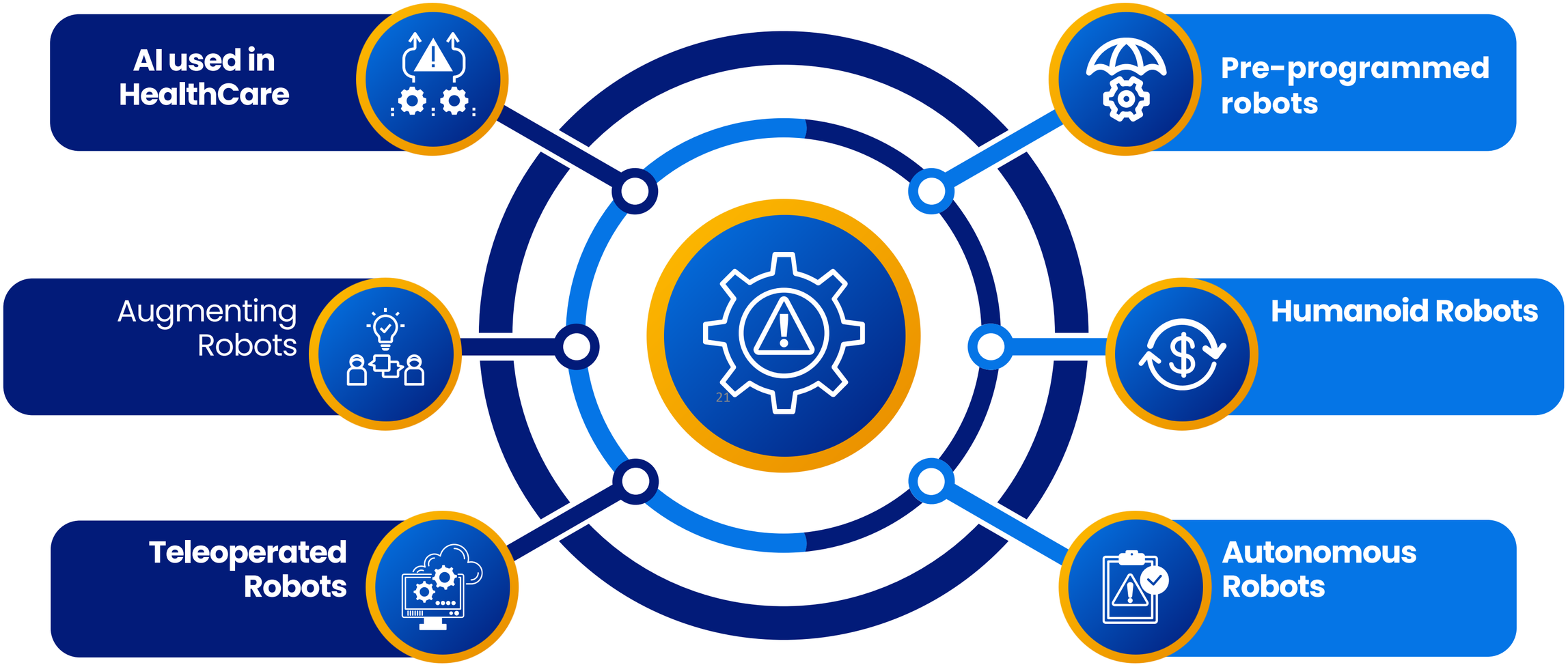




What is machine learning in the “real world”?

Reflection #2 - Robots

Genetic testing, robotic surgery, cancer research, cancer detection/research



Challenges – data access, bias, scaling and integration, lack of transparency, privacy, uncertainty over liability

HealthCare Robotics

Healthcare Sector

Da Vinci Surgery | Robotic Assisted ... US$2-million 5500 globally

Xenex Germ Zapper
$125K

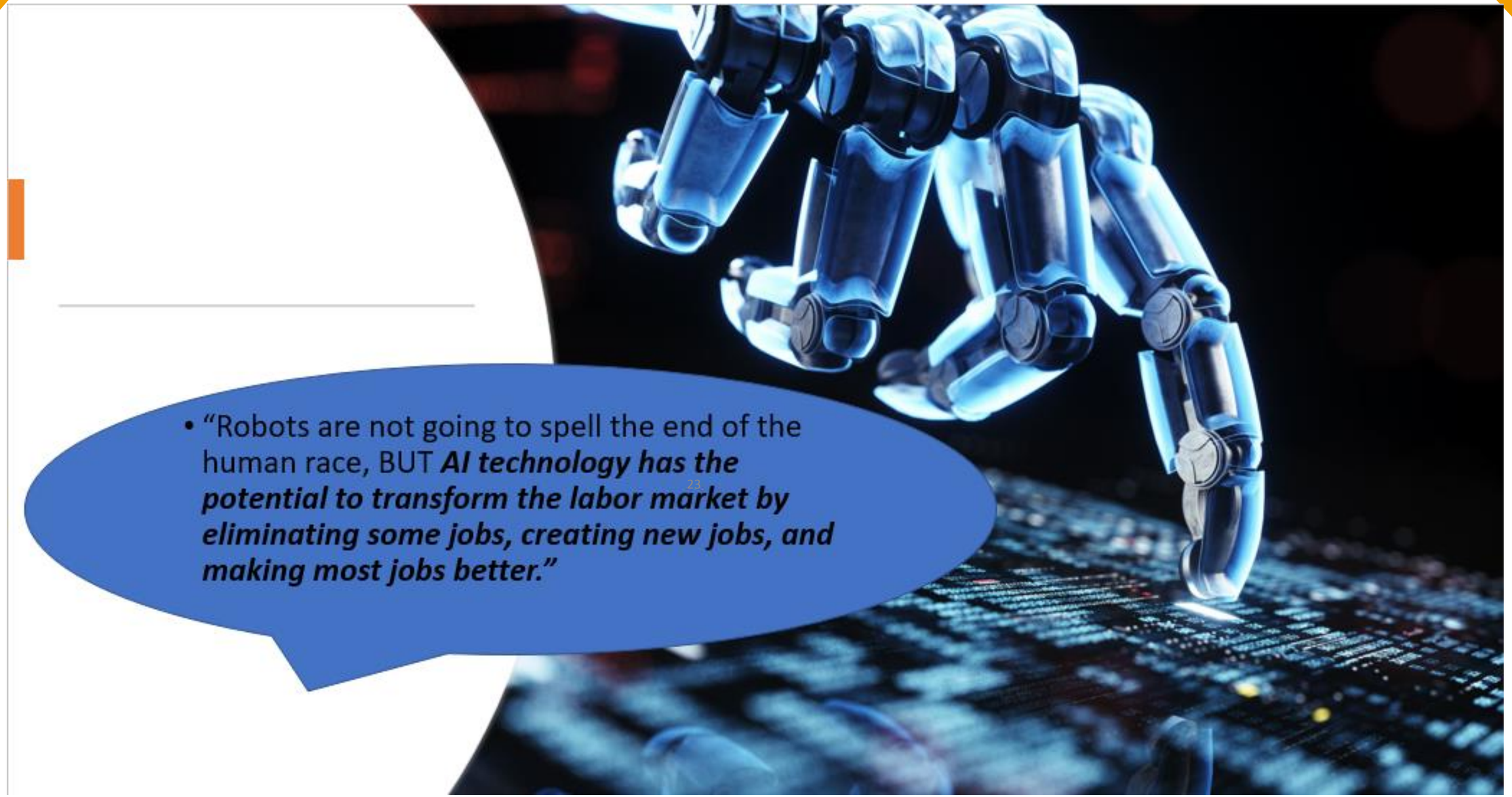
RoboBear

The CyberKnife | Cancer Treatment | LC...

Aethon TUG Robot - YouTube

$105,000 for purchase or $1,500 per month for a lease

HealthCare Robotics



- "Robots are not going to spell the end of the human race, BUT ***AI technology has the potential to transform the labor market by eliminating some jobs, creating new jobs, and making most jobs better.***"

Jobs will change and they will change for the better…..are you ready?

Exhibit 1 - Methodology to Project Workforce Supply and Demand in 2030

Categorizing jobs

Job family groups encompass similar occupations and represent the first level of categorization. They include, for example:

- Production occupations
- Business and financial operations occupations

Job families represent the second level of categorization, such as:

- Metal and plastic workers
- Financial specialists

	Number of job family groups	Number of job families
US	22	93
Germany	22	86
Australia	22	82

Workforce supply

Total available workforce split by job family and age

- Working population (including regular employees, self-employed people, and civil servants)
- Unemployed population

Entries into workforce

- ⊕ Graduates from education system
- ⊕ Net migration

Exits from workforce

- ⊖ Retirement
- ⊖ Mortality

Workforce demand

Total workforce demand split by job family and year

- Working population (including regular employees, self-employed people, and civil servants)
- Open positions

Job creation

- ⊕ Additions due to technology
- ⊕ Nontech job gains due to economic growth

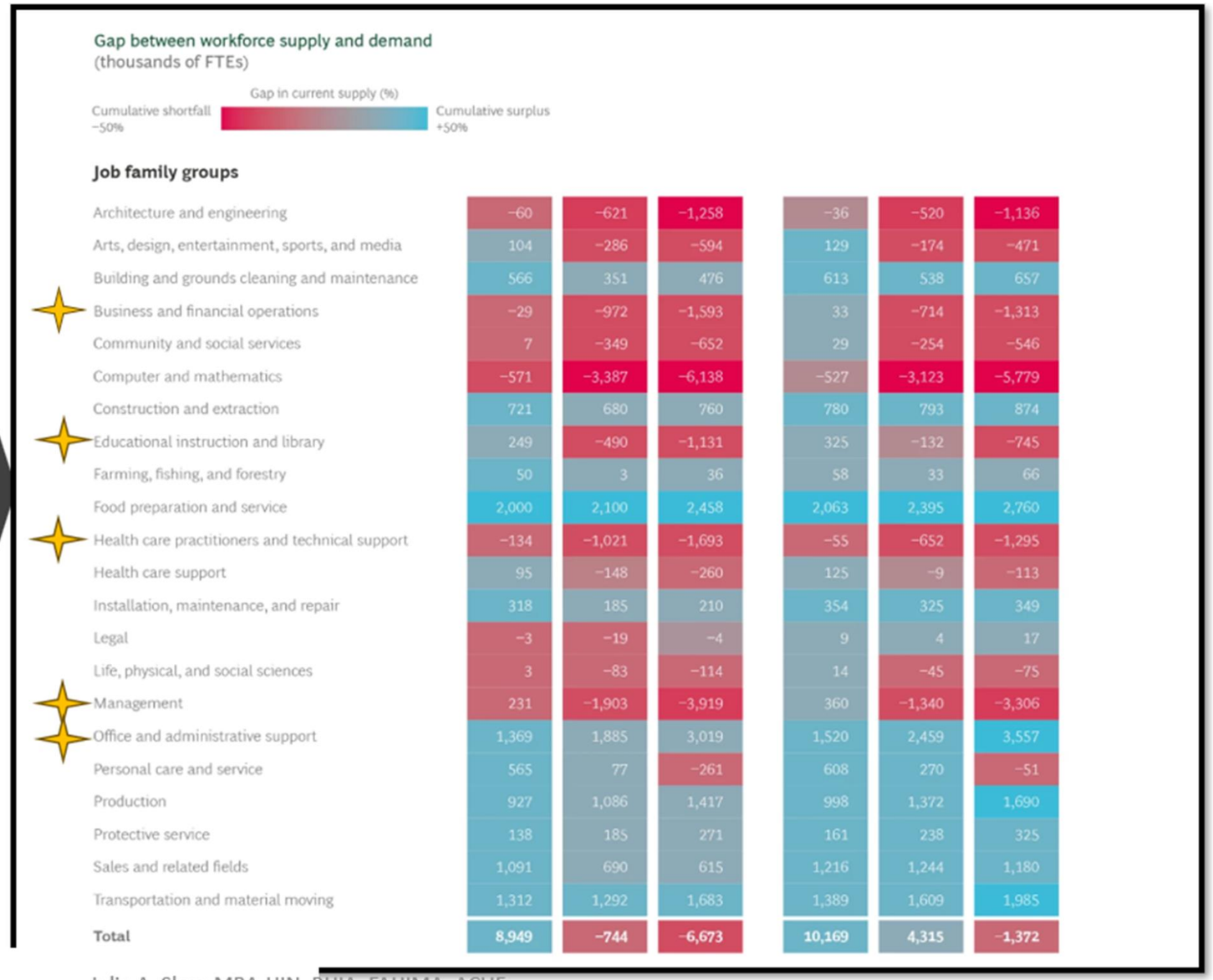
Job reductions

- ⊖ Automation
- ⊖ Augmentation-based efficiency increases

Sources: Faethm; BCG analysis.

Note: All national-level data drawn from federal statistics offices.

How will AI impact Careers?



Gap between workforce supply and demand
(thousands of FTEs)

Gap in current supply (%)

Cumulative shortfall −50%

Cumulative surplus +50%

Job family groups						
Architecture and engineering	−60	−621	−1,258	−36	−520	−1,136
Arts, design, entertainment, sports, and media	104	−286	−594	129	−174	−471
Building and grounds cleaning and maintenance	566	351	476	613	538	657
Business and financial operations	−29	−972	−1,593	33	−714	−1,313
Community and social services	7	−349	−652	29	−254	−546
Computer and mathematics	−571	−3,387	−6,138	−527	−3,123	−5,779
Construction and extraction	721	680	760	780	793	874
Educational instruction and library	249	−490	−1,131	325	−132	−745
Farming, fishing, and forestry	50	3	36	58	33	66
Food preparation and service	2,000	2,100	2,458	2,063	2,395	2,760
Health care practitioners and technical support	−134	−1,021	−1,693	−55	−652	−1,295
Health care support	95	−148	−260	125	−9	−113
Installation, maintenance, and repair	318	185	210	354	325	349
Legal	−3	−19	−4	9	4	17
Life, physical, and social sciences	3	−83	−114	14	−45	−75
Management	231	−1,903	−3,919	360	−1,340	−3,306
Office and administrative support	1,369	1,885	3,019	1,520	2,459	3,557
Personal care and service	565	77	−261	608	270	−51
Production	927	1,086	1,417	998	1,372	1,690
Protective service	138	185	271	161	238	325
Sales and related fields	1,091	690	615	1,216	1,244	1,180
Transportation and material moving	1,312	1,292	1,683	1,389	1,609	1,985
Total	**8,949**	**−744**	**−6,673**	**10,169**	**4,315**	**−1,372**

Sources: Faethm; BCG analysis.

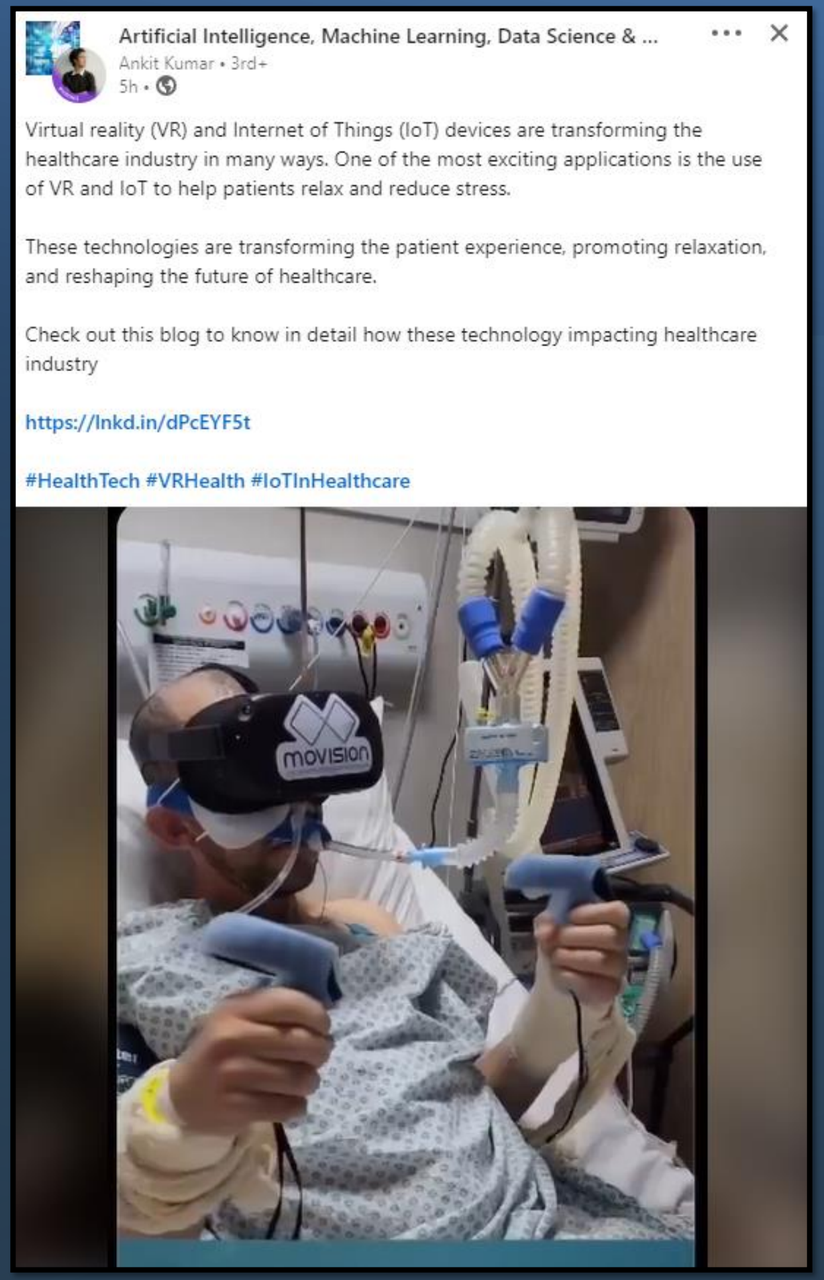
Note: Aggregate results calculated by summing all surpluses and shortfalls within the 22 job families. Because of rounding, not all numbers add up to the totals shown.

IMPACT on Business Community: Pros and Cons for Business/Accounting

Per Till Leopold, lead of the World Economic Forum's Global Challenge Initiative on Employment, Skills and Human Capital

"We expect around 35% of skills will be different in the near future [due to AI]."

The Institute of Chartered Accountants in England and Wales

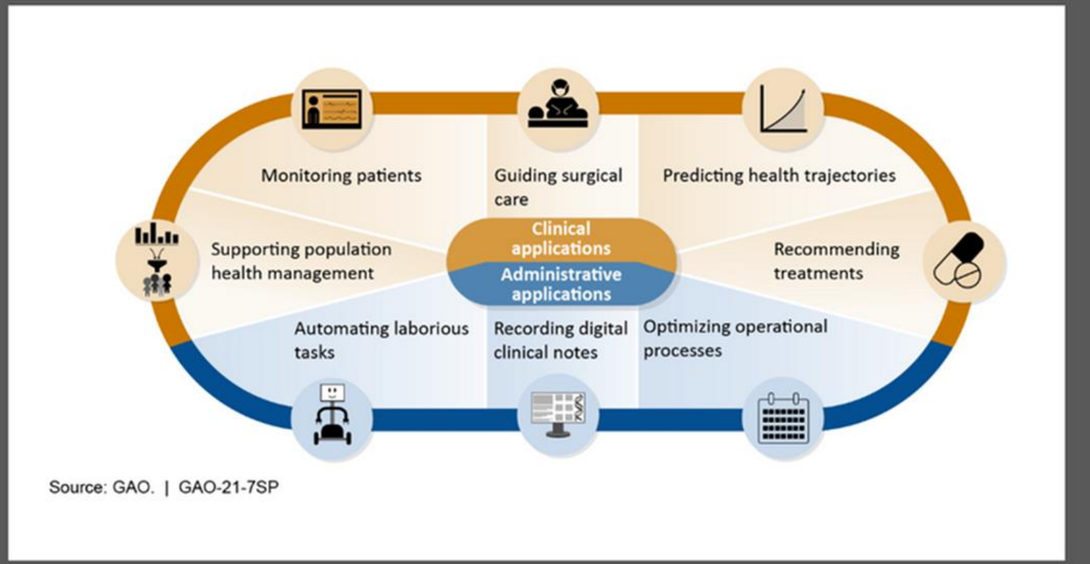


Health CARE IMPACT:

Artificial Intelligence's Impact on the Healthcare Industry

Virtual physicians
Patients' treatment is tailored to their medical history.
Medicines are identified based on disease.
Candidate identification for clinical trials
Disease identification and diagnosis
Wearable health monitors
Epidemic outbreak prediction
Automation of routine activities
Surgical Robots

Streamline processes
Improve decision making
Enhance patient care
Reduce operational costs



How will AI impact Healthcare/HIM jobs?

Health Data Analysts/Informaticians

Medical Coders

+8% growth through 2029

Radiologist and Medical imaging professionals

NLP Specialists

Clinical Decision Support Specialists

HealthCare IT system administrators and engineers

Healthcare App Developers and User Experience Designers

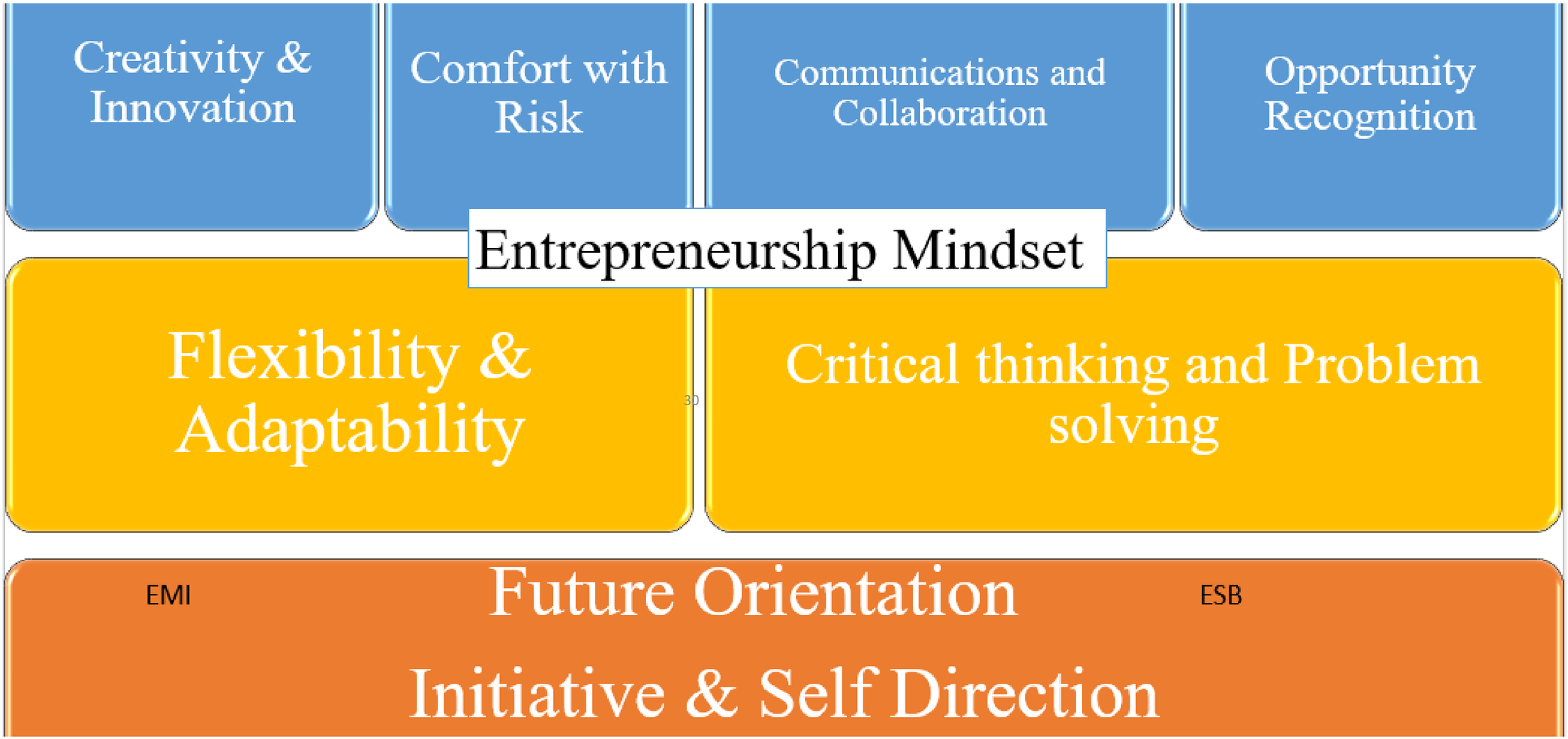
Telemedicine and remote monitoring specialists

Population health analysts

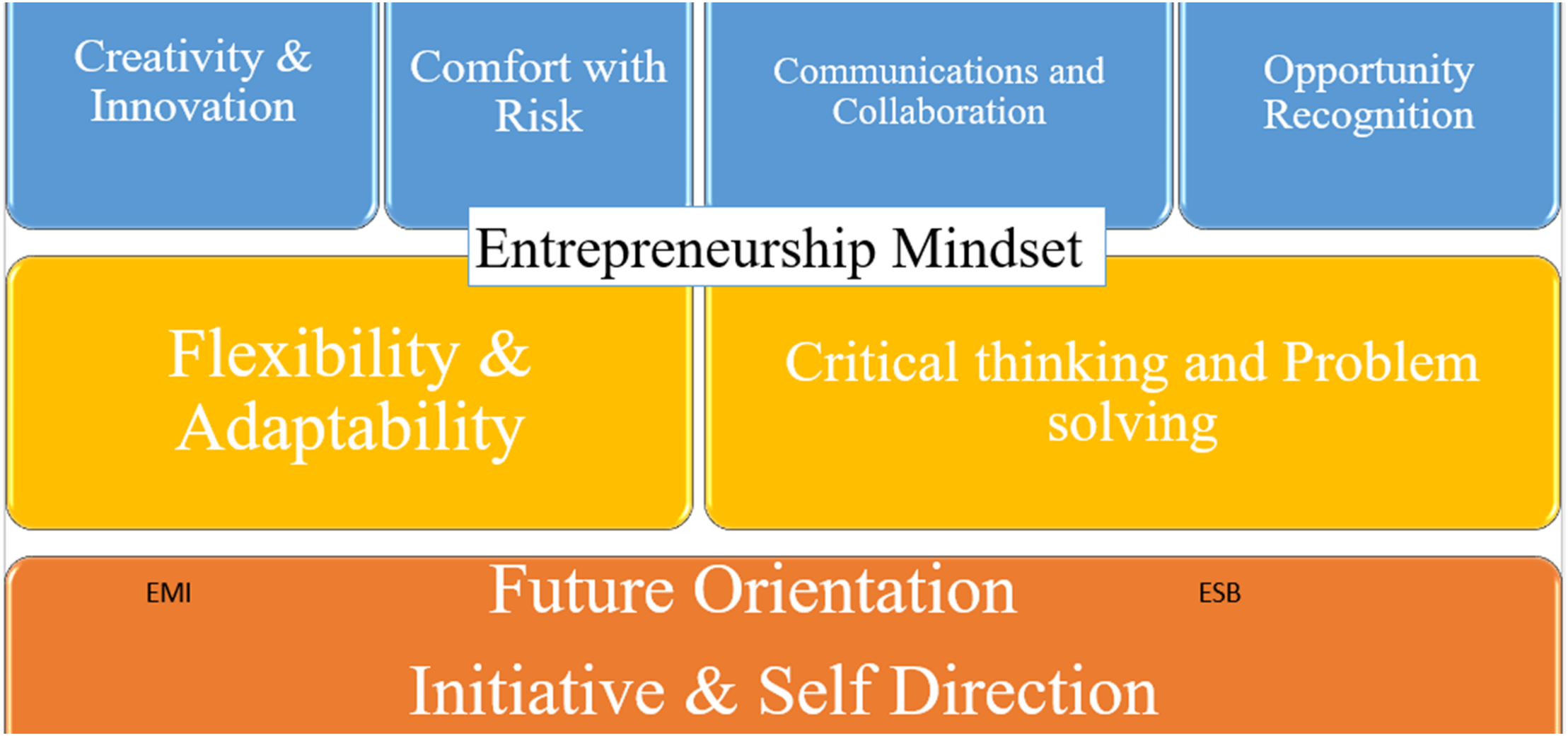
Preauthorization/Financial Specialists

Reflection #5 -
Entrepreneurship Mindset

Identify minimally 3 Entrepreneurial attributes that you have



Reflection #6
Identify minimally 3 DIFFERENT attributes that you EXCEL in



Skills employers need

The Future Jobs Report 2023
Top Skills to stay on top or brush up on

AI and Big Data

Analytical Thinking

Curiosity

Life - Long Learning

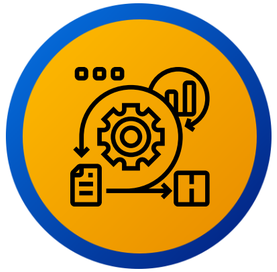
Leadership

Creative Thinking

803 Companies/27 industries/>11.3M employees

Reflections #7 and #8

Are you SHINING?



Are you Innovation ready?

Are you influencing?

Are your skill sets “robot – proof?

Are you serving, leading and volunteering?

How do you plan to make an impact and bring VALUE to the community and/or organizations for which you work?

BENEFITS OF LIFELONG LEARNING

NURTURES CURIOUS MINDS

BUILDS NEW SKILLS, IMPROVES THOSE YOU ALREADY HAVE

OPENS MINDS AND INCREASES WISDOM

IMPROVES MEMORY AND INCREASES SELF-CONFIDENCE

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Systems analysis/evaluation			
Security, Privacy			
Complex problem solving			

Florida Employment Trends

Health Information Technologists

STEM Allied Health Profession
FL:21% Projected growth
US:17% Projected growth

Health Informatics Specialists

STEM
FL: 22% projected growth
US: 9% faster than average project growth

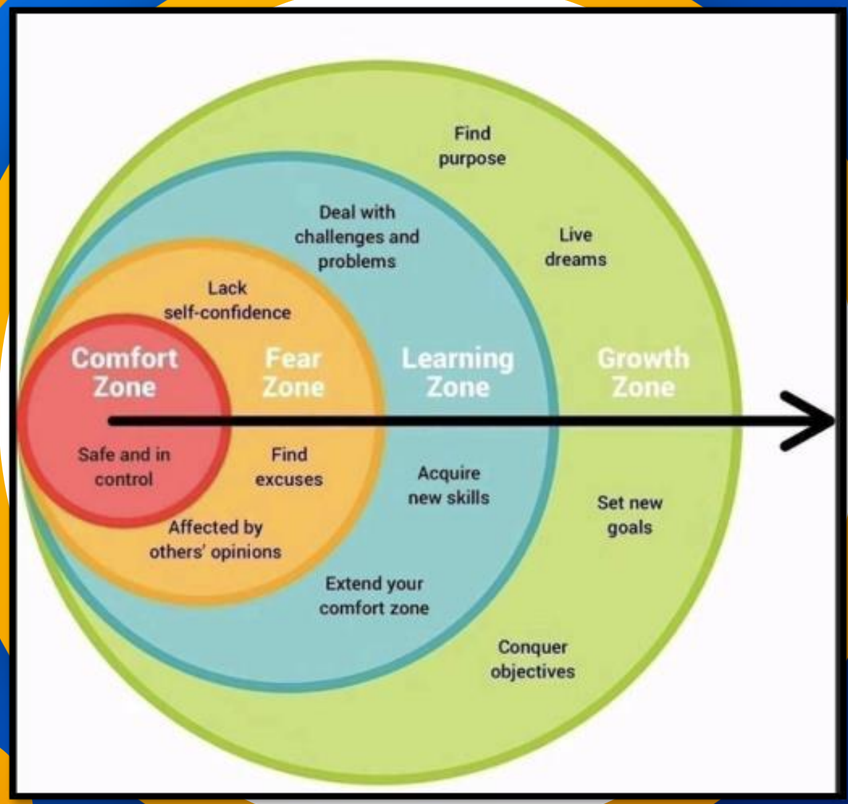
Computer and Information Systems Managers

STEM
FL 27% Projected growth
US: 16% Projected growth

The future of AI is bright.....if we ACT

The hardest thing to do is leave our comfort zone.

But you must let go of the life you're familiar with and take the risk to live the life you dream about.



Source: Leadership First

WHY does it all matter?

Did We.....

- **Raise awareness on hot topics impacting our profession.**
- **Identify opportunities to upskill and fulfill knowledge gaps to SHINE in your sphere of influence.**
- **Encourage reflection specific to influencing, life learning, and volunteering.**

Thank you for SHINING!

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Mother Theresa

3523955024 or
Julie.shay@sfcollege.edu

www.sfcollege.edu/3520

Please connect with me at LINKEDIN
linkedin.com/in/julie-a-shay-mba-hin-rhia-fahima-acue-03948618/

SF Blount Hall, Gainesville, FL

Thank You

Have a great rest of the Conference!

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