GRAY™
DECISION INTELLIGENCE

5 EMERGING PROGRAMS TO WATCH IN 2026

JANUARY 15, 2026

Today's Presenters

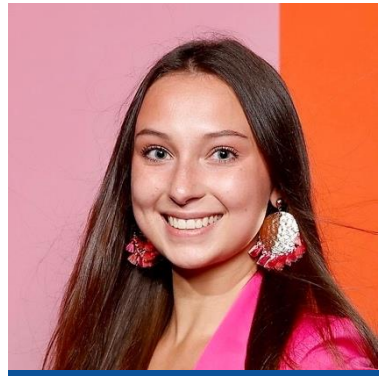
Elaine Millar
AVP, Research

Mary Pahissa Upchurch
EVP, Customer Success

Monica Bilson
Senior Project Manager

Youssef Aljabi
Sr. Manager, Data Science & Product

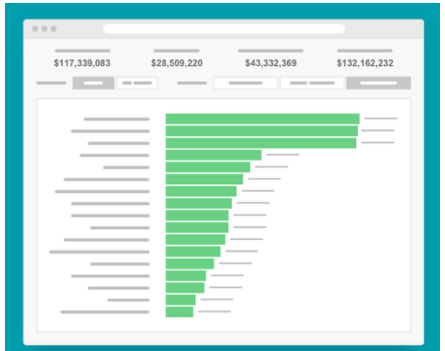
Ned Caron
EVP & CRO



Reeghan Gilden
Manager, Marketing

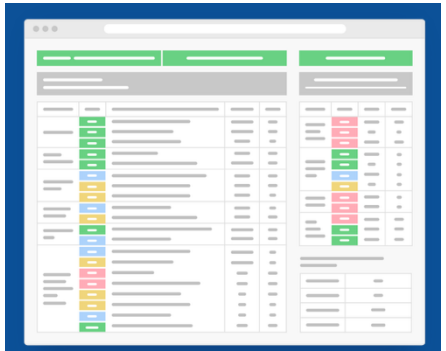
Leading-Edge Software for Higher Education

Gray DI's Program Evaluation System (PES) is designed to help educational institutions make data-informed decisions.



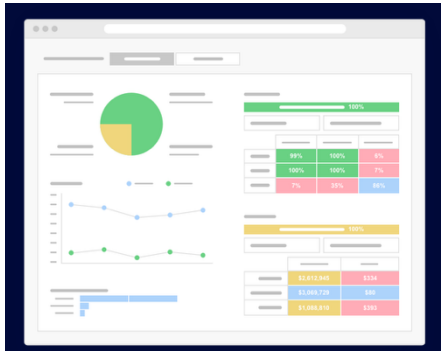
PES ECONOMICS & OUTCOMES

Optimize Performance



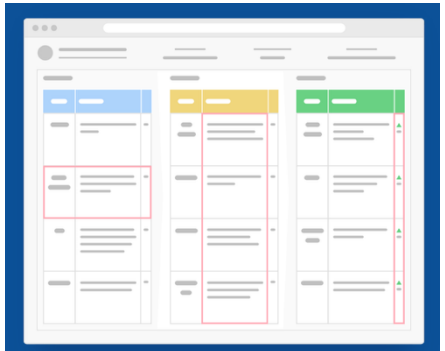
PES MARKETS

Inform Program Decisions



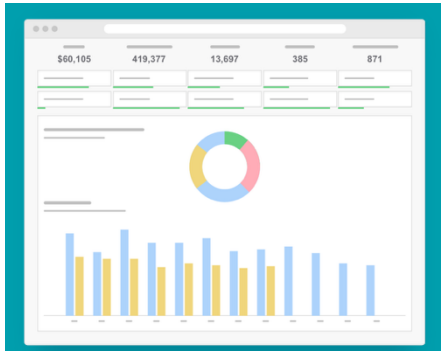
ACADEMIC MANAGEMENT

Data-Informed Evaluation



PES PREDICT & PROGRAM REMIX

Reimagine Your Academic Portfolio



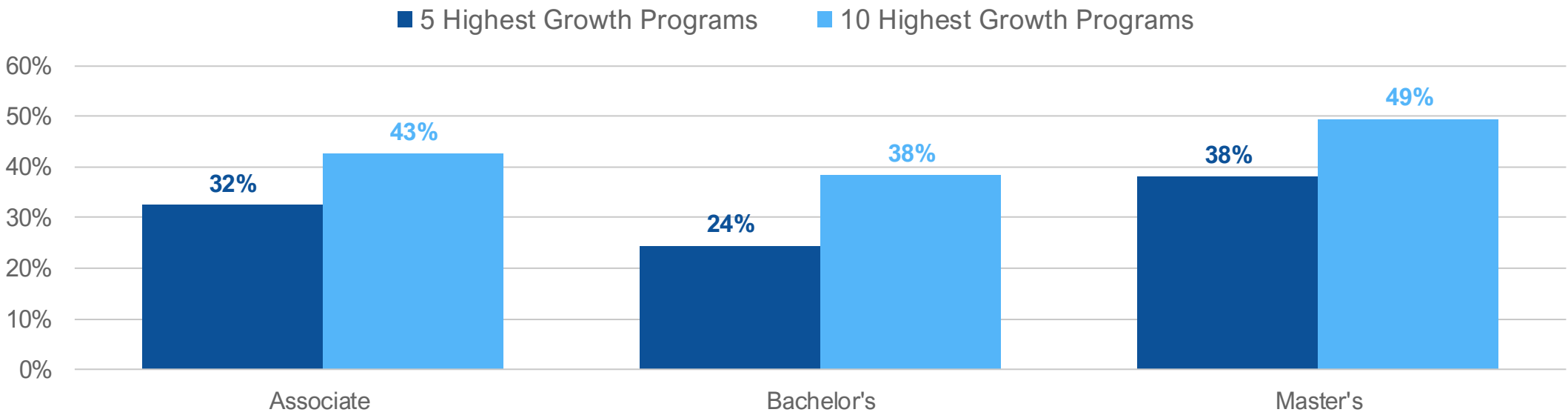
DATA DASHBOARDS

Customizable Data Displays

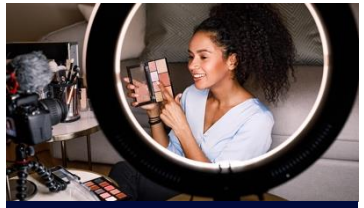
Programmatic Growth is Concentrated

What programs might drive future growth?

Share of Enrollment Growth (Units) by Award Level*
Unit Growth in New Student Enrollment, 2019-20 to 2024-25

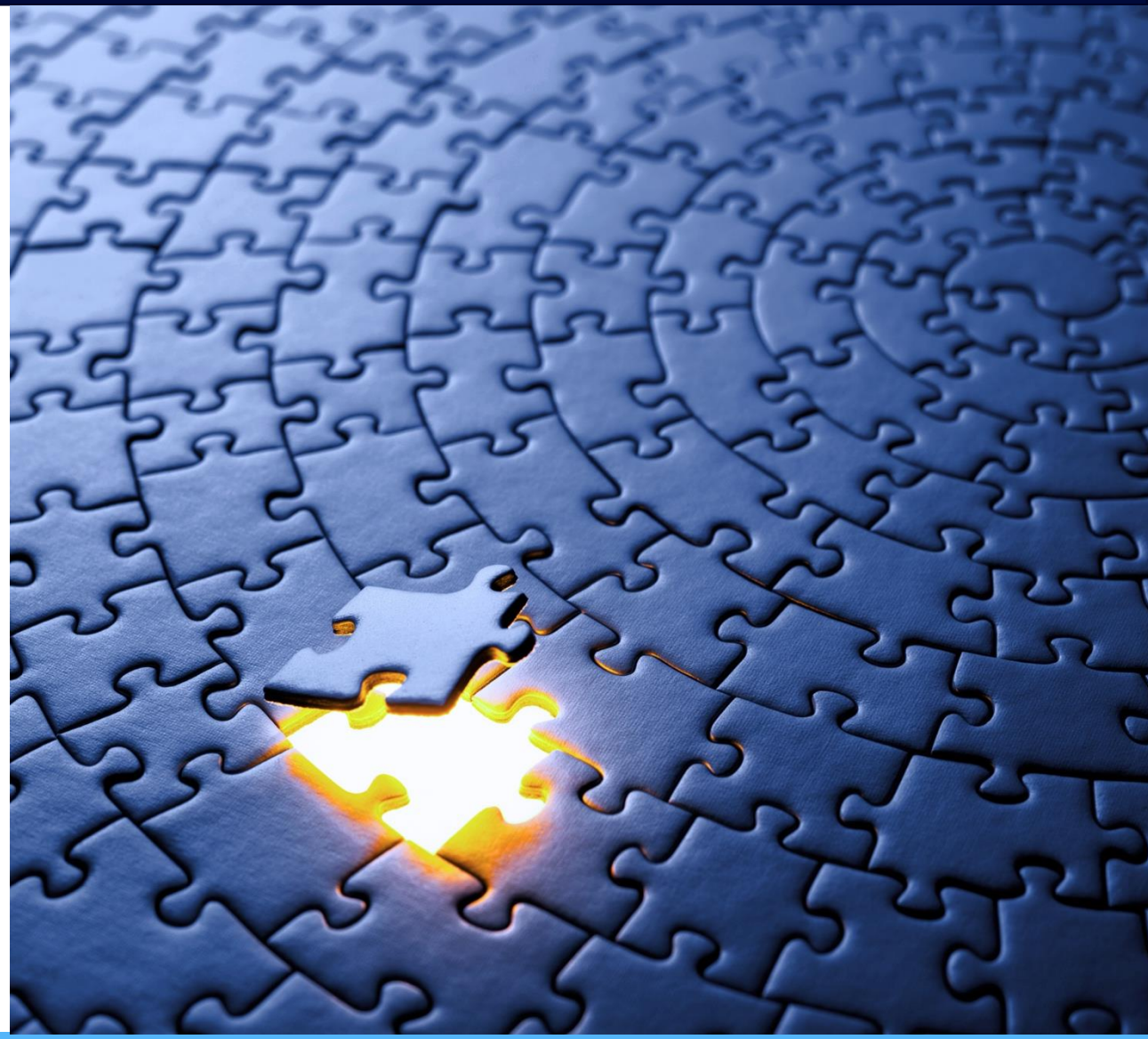


Source: Gray Decision Intelligence Program Evaluation System with data from the National Student Clearinghouse
*Share of unit growth in new student enrollment of all programs experiencing positive growth

2020	2021	2022	2023	2024	2025
 Cannabis	 Data Analytics	 Creative AI	 Creator Economy	 Digital Bioacoustics	 Biomimicry
 Autonomous Vehicles	 Hydrogen Economy	 Cellular Agriculture	 Energy Storage	 Technology & Policy	 Blue Economy
 Quantum Computing	 Space Commercialization	 Telehealth	 Smart Plants	 Regenerative Medicine	 Mars

Elements to Consider

- Timing
- Size
- Mission
- Degree fit
- Difficulty
- Funding



AI INFRASTRUCTURE

We are surrounded by AI in every aspect of our lives.

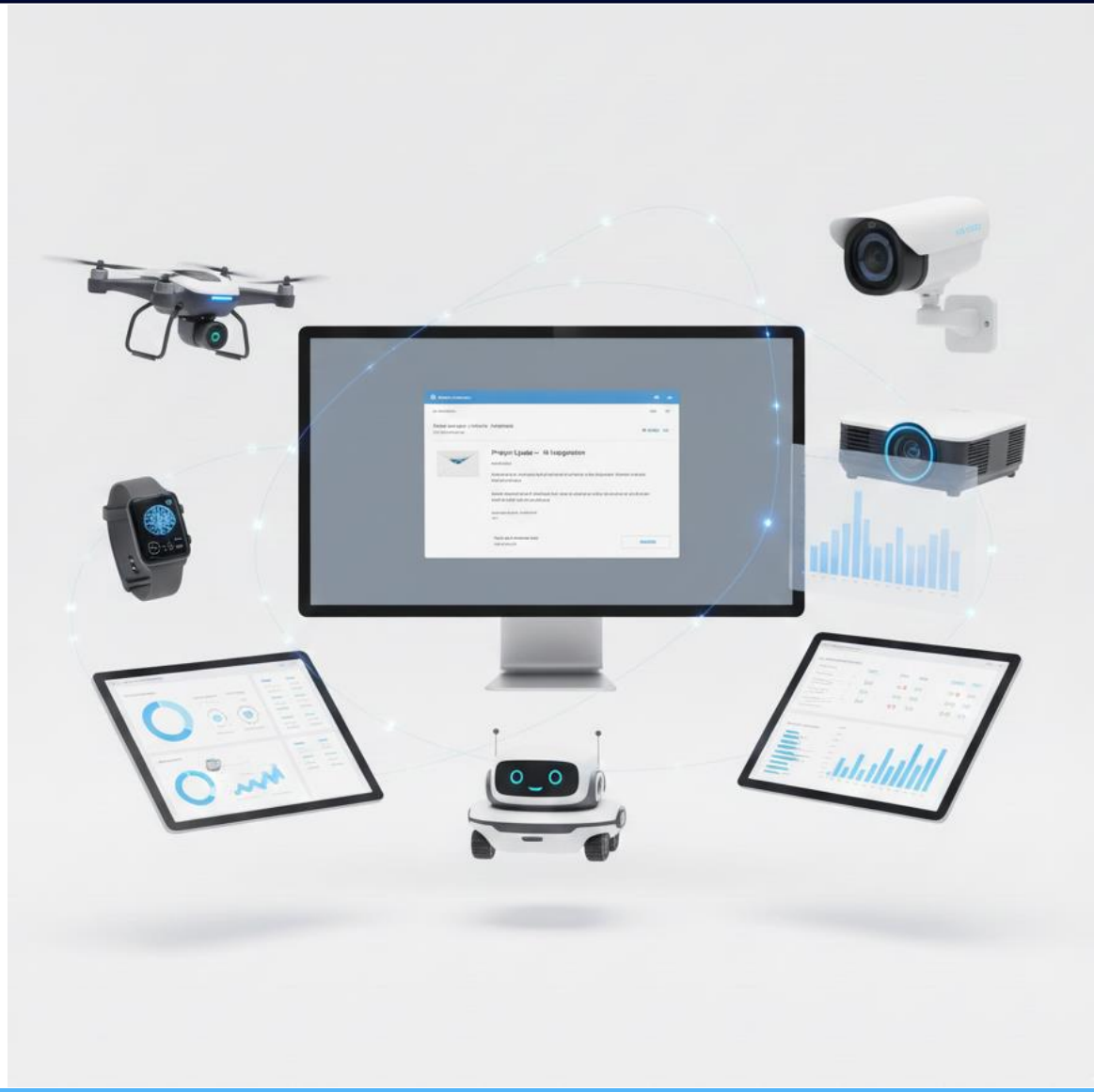
- At home

We are surrounded by AI in every aspect of our lives.

- At home
- At school

We are surrounded by AI in every aspect of our lives.

- At home
- At school
- At work



AI Infrastructure Makes It All Happen

- Land
- Buildings
- Hardware
- Software
- Networking
- Power
- Water
- Cooling

The $5 Trillion Physical Reality of AI

A Data Center Boom

- Demand for data center capacity could triple by 2030
- Data center construction is booming
- **$5.2 trillion** in investments for AI data center infrastructure by 2030

The Resource Crunch

The largest consumer of electricity by 2035?

- **Land:** Hundreds or thousands of acres per campus
- **Power:** 12% of US energy demand by 2030
- **Water:** 312 - 767 billion liters

Resource Constraints Powering New Ideas

Necessity is the mother of invention…

- Migration to rural America
- Renewed interest in nuclear and other alternative power sources
- Innovations in cooling technologies
- AI infrastructure in space?

Implications and Opportunities: 499k New Construction Workers Needed

Program opportunities for General Construction and Fabrication, Electrical and Mechanical Installation, HVAC and Cooling Systems, Fiberoptics and Cabling

Ivy Tech Community College

Google STAR program

- Partnership with Google Skilled Trades and Readiness (STAR) program
- Developing local talent to fill over 1,000 construction jobs for Fort Wayne data center build-out
- Provides paid training in construction, carpentry, mechanical, electrical, and fiber optics

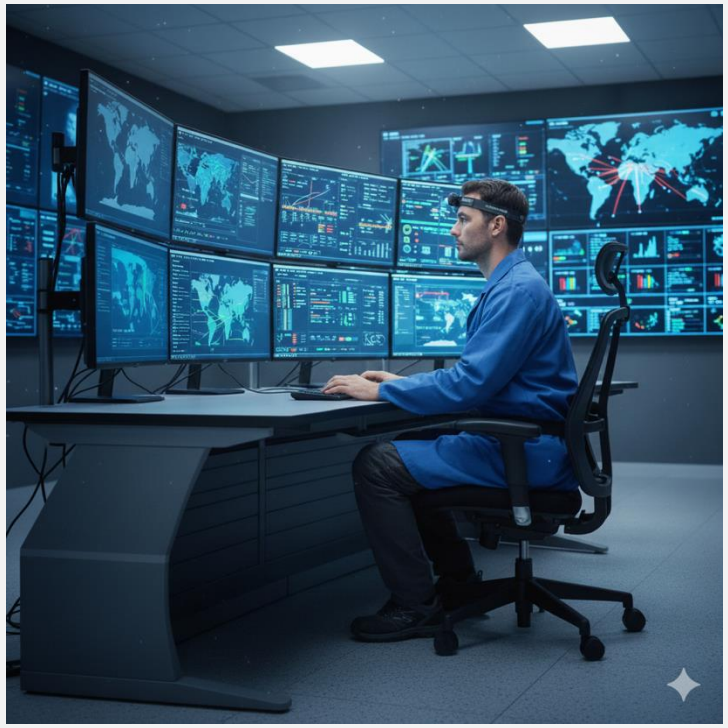
Implications and Opportunities: 600k Data Center Workers…and Counting

Program opportunities for Data Center Technicians, Predictive and On-going Maintenance, Remote Monitoring, Security, and Robotics Technicians

Maricopa Community Colleges

Data Center Operations Certificate

- Prepares students for entry-level roles as a mechanical, electrical, and controls technicians
- Core areas of study include
  - Critical Infrastructure
  - Automation & Controls
  - Mechanical Systems
  - Safety
- Can be embedded within the AAS in Automated Industrial Technology



Implications and Opportunities: Forming Programs

Energy Strategy, Procurement, and Policy / Nuclear and Renewable Energy / Water Policy

Univ of California, Berkely

Certificate in Global Digital Infrastructure

University of Chicago

MS in Climate and Energy Policy

Southern Methodist University

MS in Datacenter Systems Engineering

MIT Energy Initiative (MITEI)

Data Center Power Forum

Arizona State University

Kyl Center for Water Policy at the Morrison Institute for Public Policy

PHYSICAL AI

Next Frontier: Generative to Physical AI

"ChatGPT Moment" for Autonomous Intelligence

- Physical AI refers to artificial intelligence integrated into physical systems that can perceive, reason, and act in the real world.
- It improves upon traditional automation by enabling machines to adapt in real time.

> *"The expansion of intelligence can only come from a co-evolution of brains (biological or digital), sensorimotor affordances, environment, and culture—not from merely tuning the gears of some brain in a jar, in isolation."*
>
> -François Chollet, 2017

Sources: "The Implausibility of Intelligence Explosion," *Medium*, Nov. 2017; "Future Directions Workshop on Embodied Intelligence," sponsored by Basic Research Office, Office of the Under Secretary of Defense for Research & Engineering; https://www.labpai.com/

What Could the World Look Like in Five Years?

And did we imagine how LLMs would change everything five years ago?

In the last five years:

- ChatGPT, Gemini, Claude
- Multimodality (text, image, audio, video generation)
- Agents
- Robotaxis

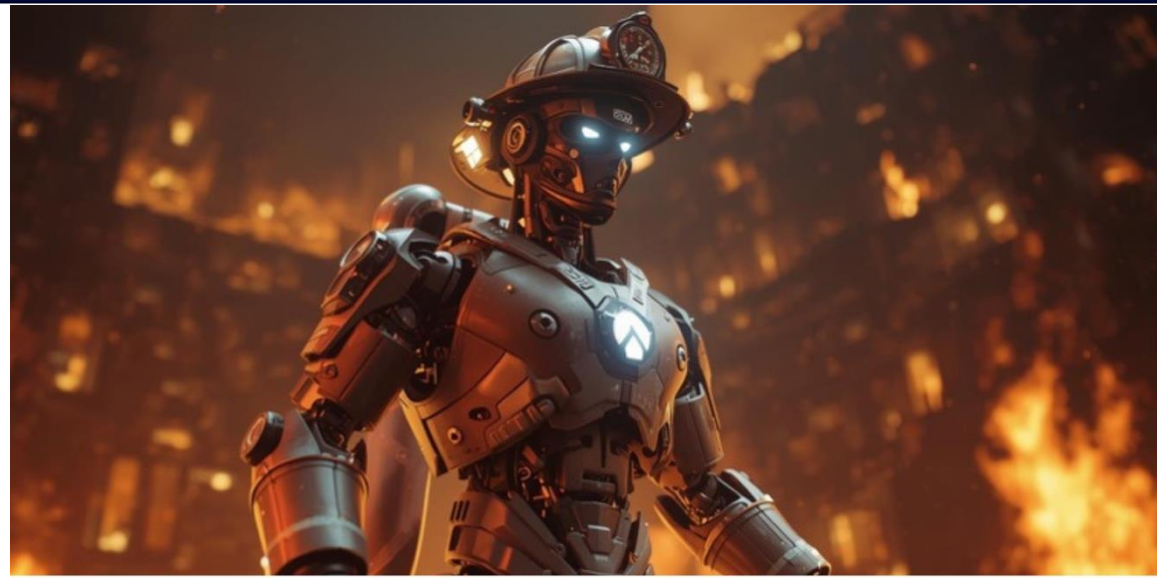
In the next five years?

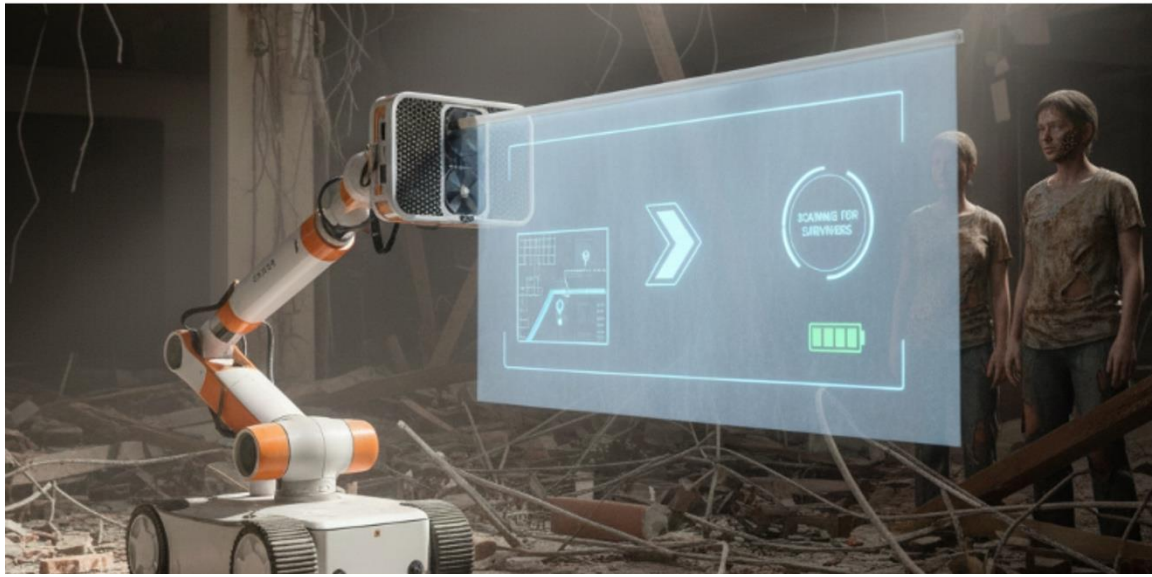
- Reasoning Models
- The Move to “World Models”
- From Collaborative to Autonomous Swarms

Physical AI is already being used.

Physical AI can operate in niche and extreme environments that were previously inaccessible.

- Dynamic Environments
- Embodied-RAG Memory
- Human-Robot Interaction
- Hazardous Missions





Expanding Healthcare

- Cognitive and emotional support
- Health monitoring
- Bio-electric control

Parking Perception DNN Engineer

- Perception experts with application focus
- Development for obstacle perception/fusion in complex driving environments

NVIDIA

Neuroengineer, Next Gen

- Implement end-to-end hardware and software solutions for prosthetic vision, including machine vision algorithms, smart glasses, and eye tracking technology.

NEURALINK

Assembly Technician – Robotics Perception Systems

- This role is a hands-on contributor responsible for assembling, integrating, and validating Field AI's sensing and compute payloads.

Field AI

Implications and Opportunities

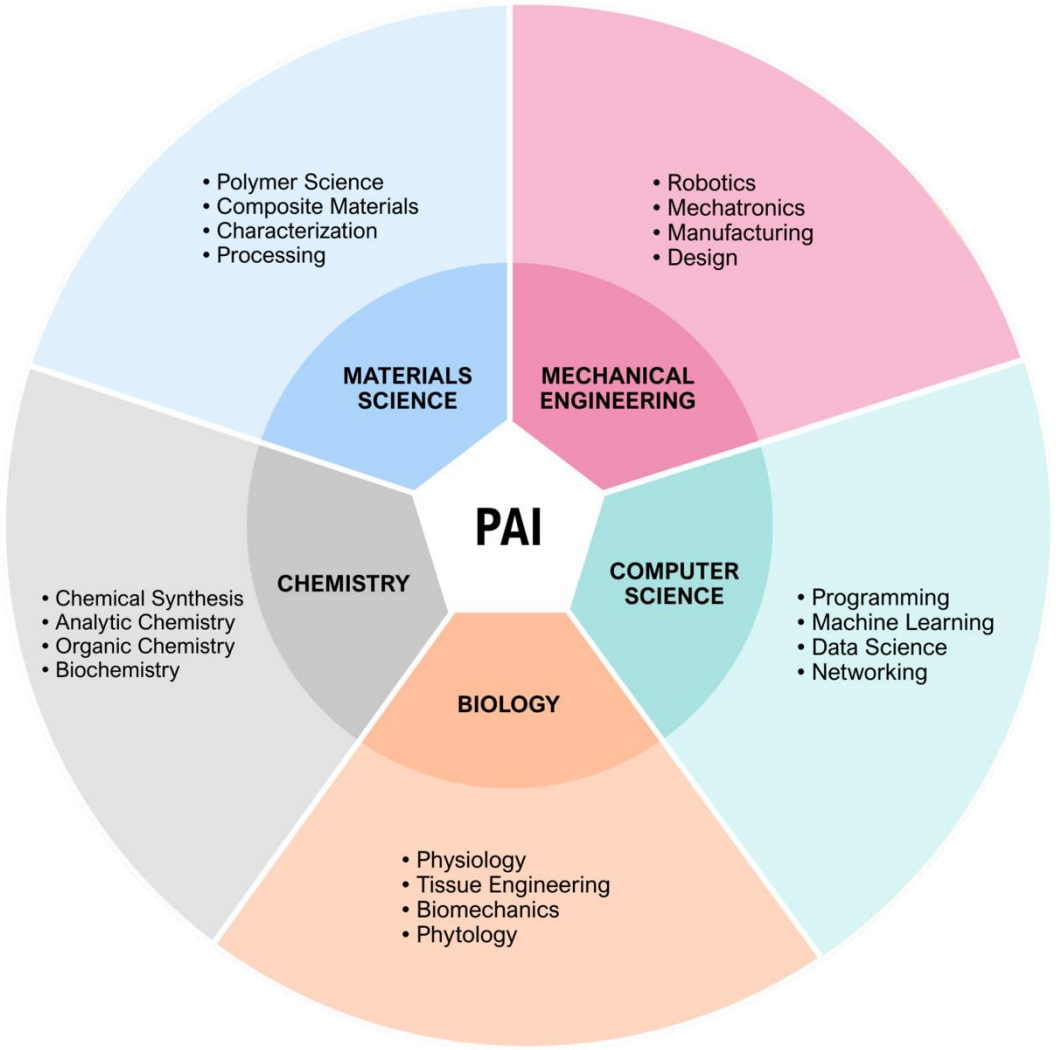
Robotics Tech to Robotics Simulation Engineers

Academic programs are multidisciplinary.

- **Certificates & Associate Degrees:** Technicians who can maintain and repair these complex systems

- **Bachelor's Degrees:** Integration of Computer Science with Mechanical Engineering. "Convergent Labs" for students to move beyond coding and connect it to sensors and actuators to see physical results.

- **Graduate Programs:** Sim-to-Real Engineers, Reinforcement Learning, Cognition, Precision



Source: "Skills for Physical Artificial Intelligence", Aslan Miriyev, Mirko Kovac, *Nature Machine Intelligence*, 2, 658-660, 2020.

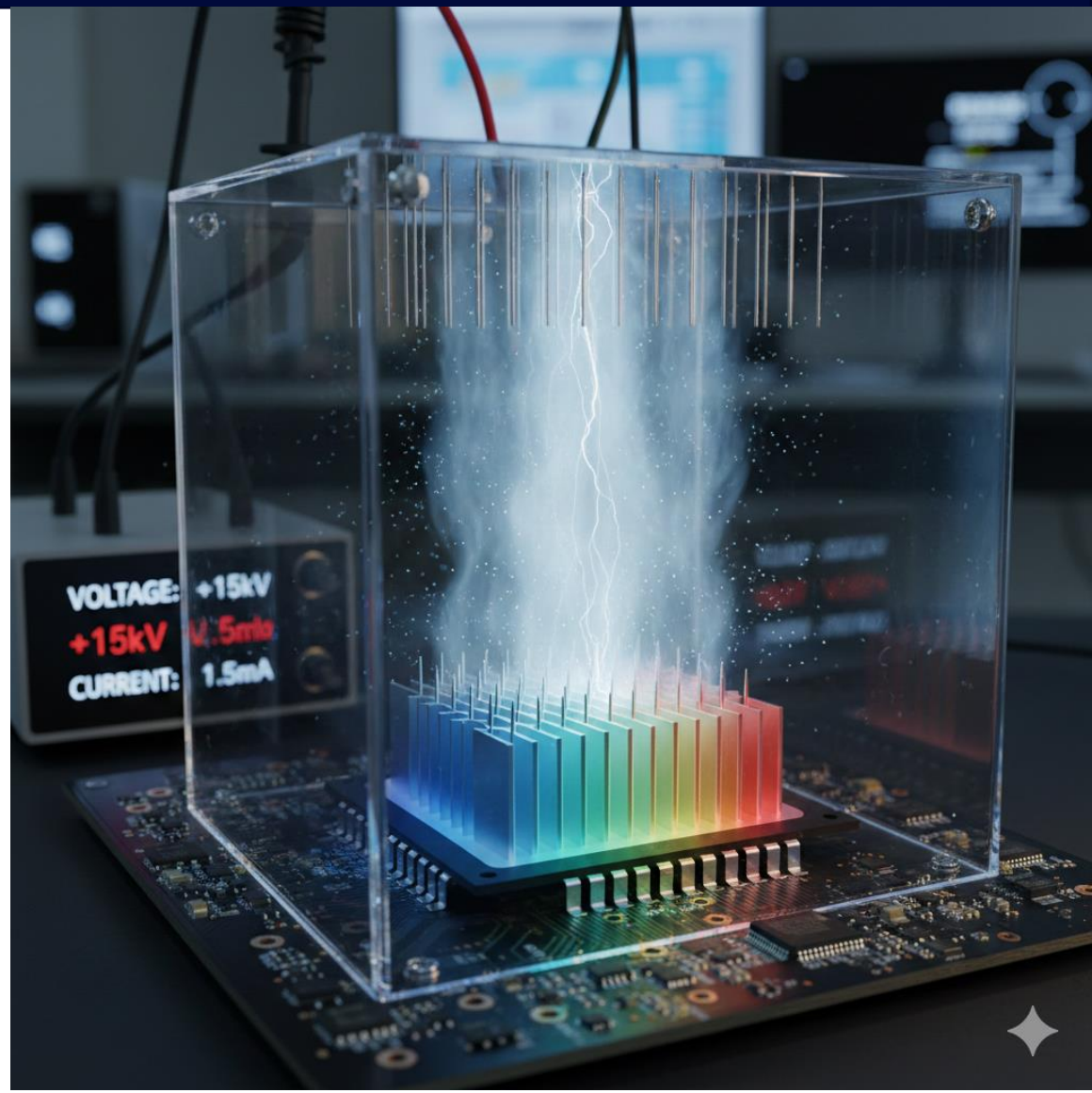
Worcester Polytechnic Institute

Robotics Engineering

- WPI is a leader within the realms of swarm technology and human-robot synergy across the healthcare, manufacturing, and exploration sectors.

- Students earning a Master's in AI can specialize in robotics. This includes:
  - Legged Robotics
  - Biomedical Robotics
  - Smart Materials
  - Safety and Guarantees for Autonomous Robots

- Partners with NASA for over 40 years



Source: https://www.wpi.edu/academics/departments/robotics-engineering/academics

Carnegie Mellon: Robotics Programs

A World Leader In PAI

- At CMU, "Physical AI" is essentially the core philosophy of their robotics programs
- Dedicated Research: The Computational and Physical Intelligence Lab
  - Cloud Lab
  - Safe AI Lab
- Over 40 labs dedicated to specific physical AI challenges, from legged locomotion (the Biped Lab) to human-robot interaction.

CMU's Autonomous Reforestation Robot Earns National Award

Source: https://www.ri.cmu.edu/ri-education/

Warren Community College

AS, Applied Robotics and AI

- Blends five major technological areas into a single, interdisciplinary curriculum:
  - Robotics
  - Artificial Intelligence (AI)
  - Mechatronics
  - Automation
  - Advanced Manufacturing

Warren Community College Launches Cutting-Edge A.S. Degree in Applied Robotics and AI, Addressing Critical Workforce Demands

By Warren County Community College Staff November 20, 2025

Source: https://www.lehighvalleylive.com/warren-county/2025/11/warren-county-community-college-launches-new-robotics-and-ai-degree-program.html

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

Will Physical AI have rights?

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

Will Physical AI have rights?

How does development of Physical AI impact the environment?

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

Will Physical AI have rights?

How does development of Physical AI impact the environment?

Will AI friends replace our human relationships?

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

Will Physical AI have rights?

How does development of Physical AI impact the environment?

Will AI friends replace our human relationships?

What if they turn on us? Could humanity go extinct?

The Tough Questions: Higher Ed's Domain

Will AI possess consciousness?

Will AI friends replace our human relationships?

Will Physical AI have rights?

What if they turn on us? Could humanity go extinct?

How does development of Physical AI impact the environment?

How will people find meaning if robots can do all jobs?

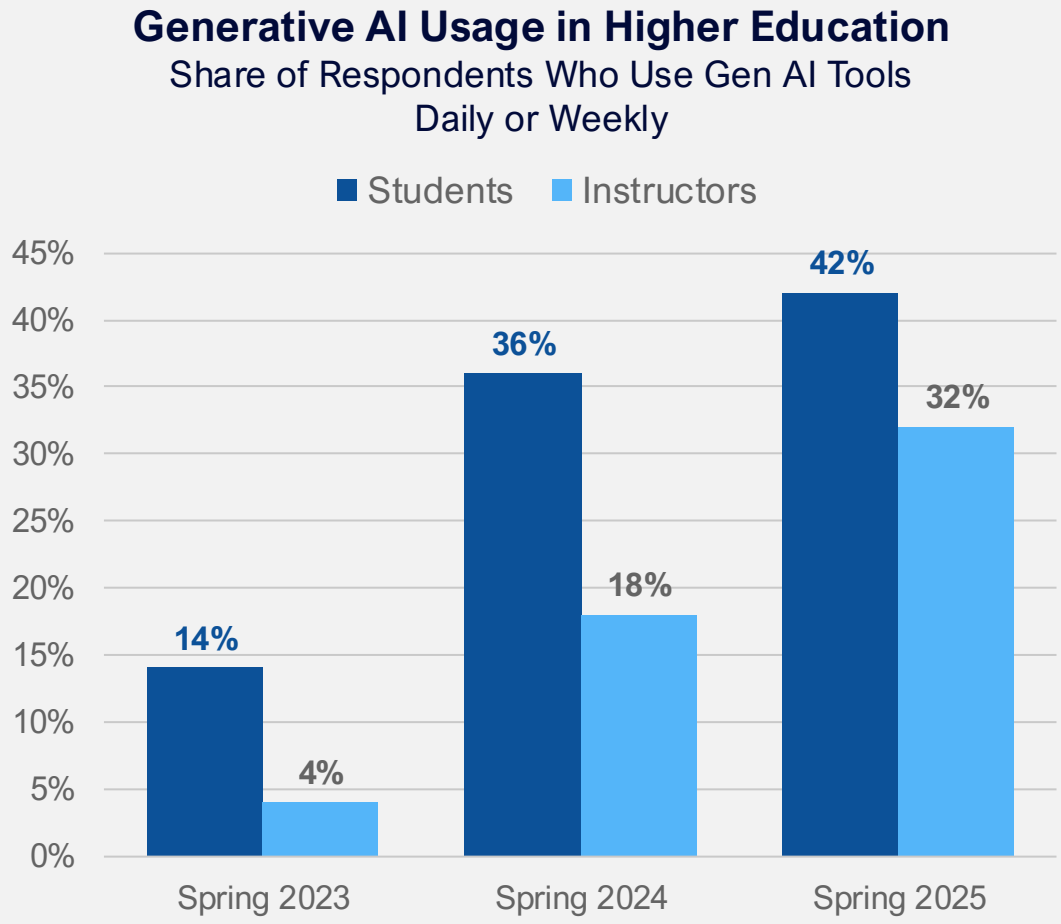
AI IN EDUCATION

AI Adoption is Growing…

Among Students and Teachers

- Students adopted AI tools quickly
- Teachers are catching up to students
- 86% of students and 85% of teachers used AI in 2024/25
- Healthy skepticism remains

> *"We're at the cusp of using AI for probably the biggest positive transformation that education has ever seen."*
>
> -Sal Khan, Khan Academy

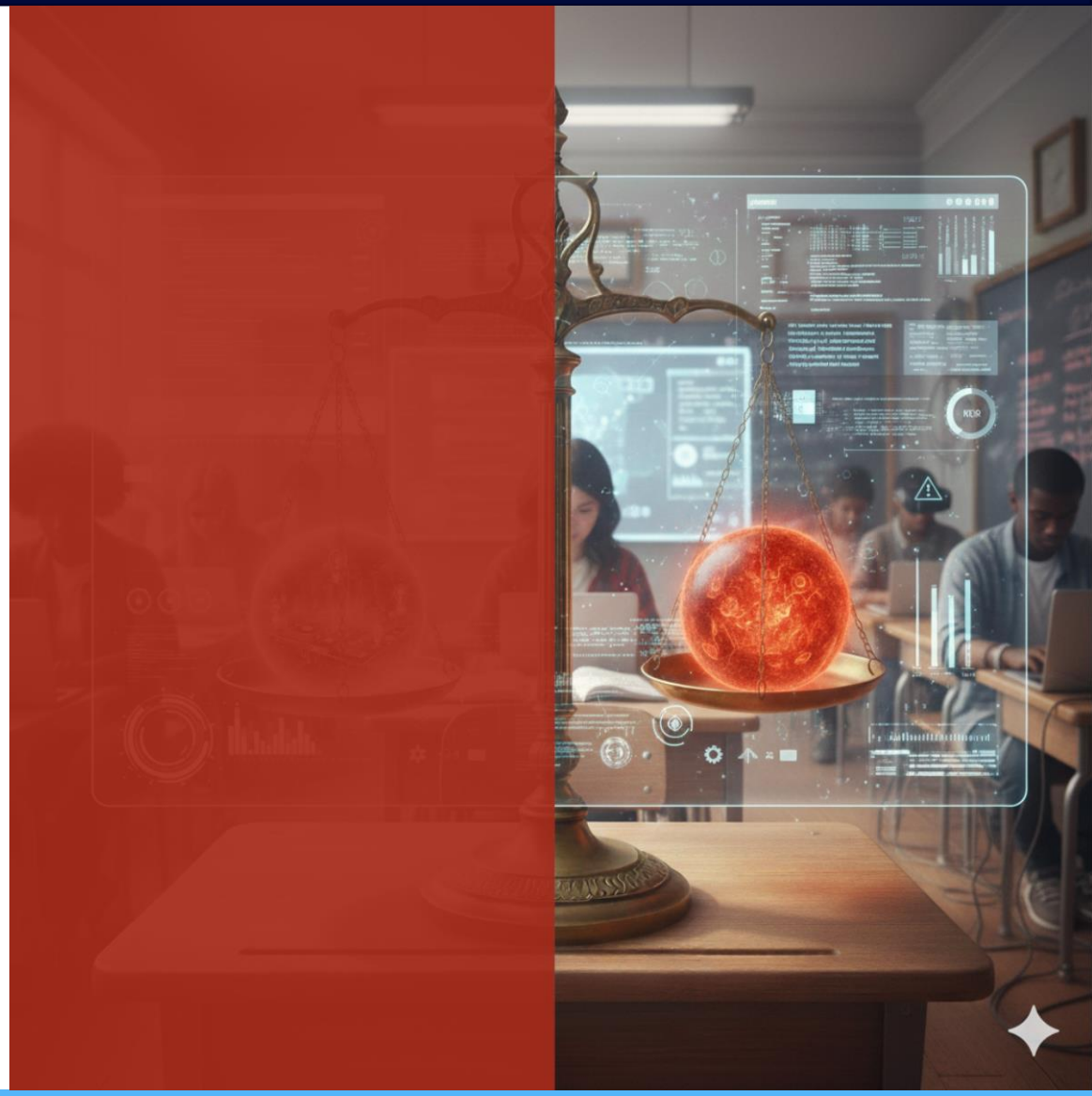


Source: Tyton Partners *Time for Class 2023 – 2025 Surveys*

The Dual Nature of AI

Proceed with Caution ⚠️

- Critical thinking and research skills
- Cognitive processing and development
- Classroom interactions and human connections

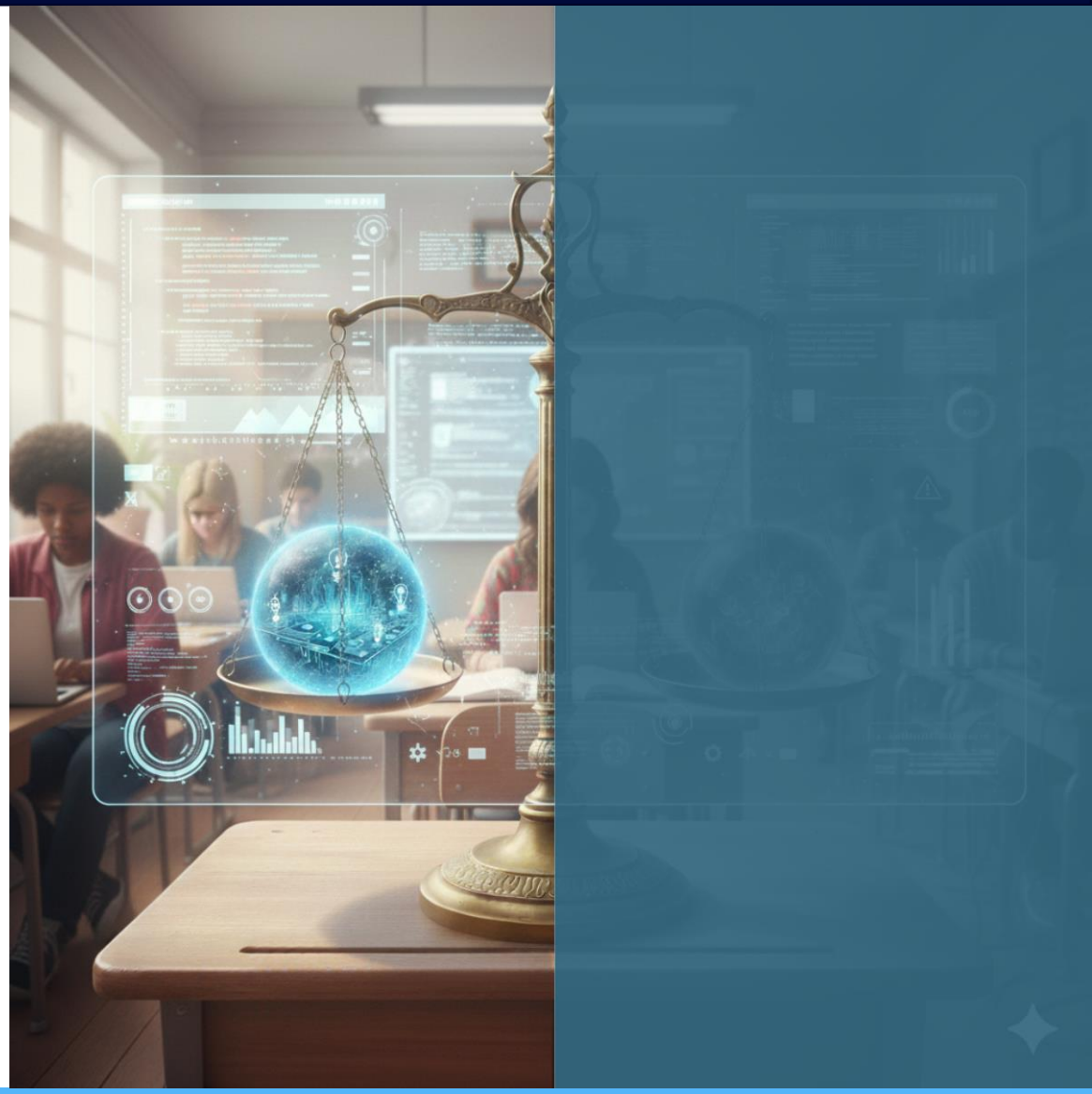


The Dual Nature of AI

AI holds tremendous promise.

- Comprehensive and globalized knowledge
- Accessibility and scale
- Personalized learning
- Augment (human) educators

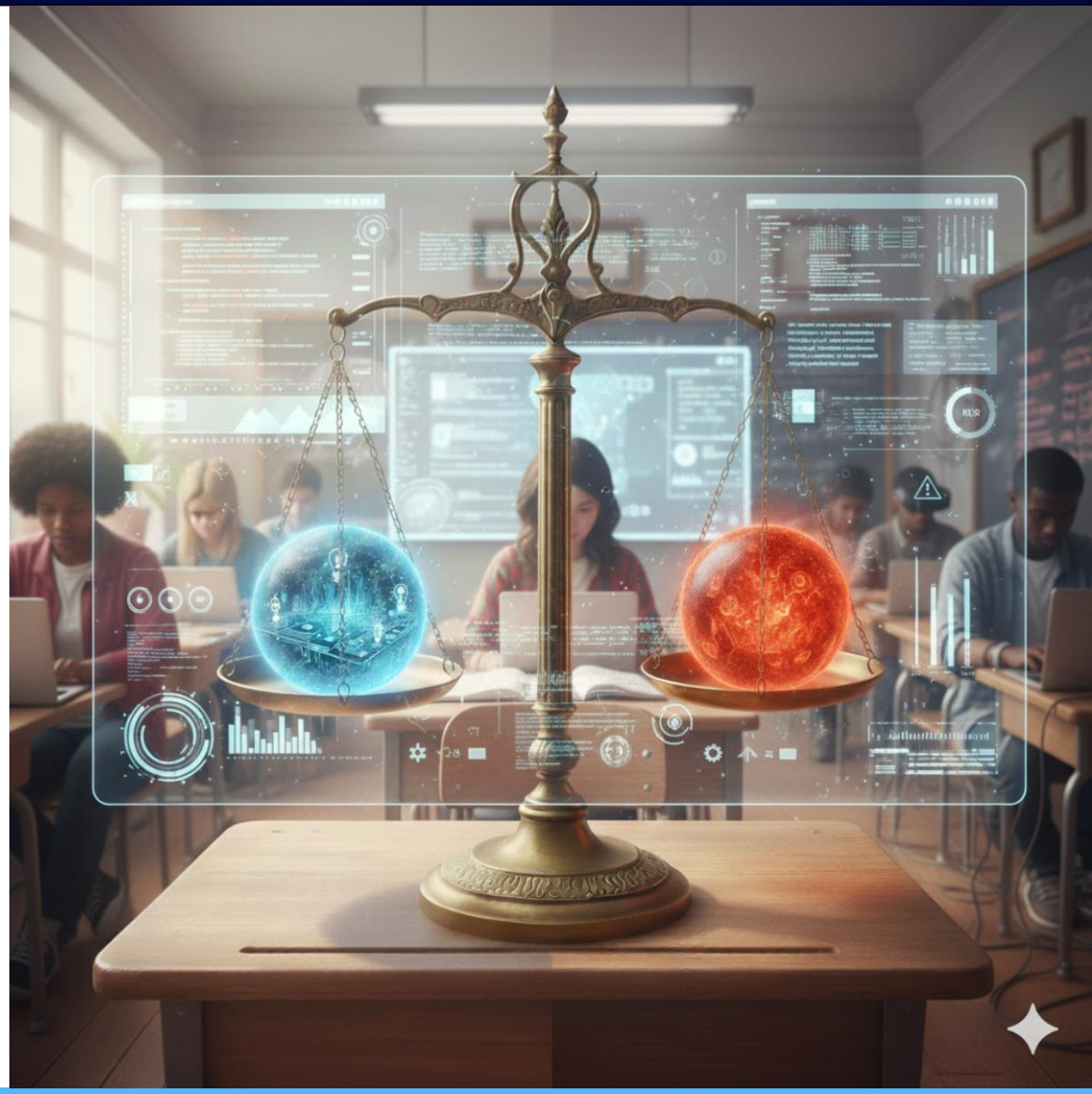
> *"AI is to this generation what spell check tools, search engines, and calculators were to recent generations. It is a technology that is readily available and will be an expected skill set in future employment"*
>
> -Ethan Weker, Math Teacher,
> The State of AI in Education 2025, Carnegie Learning



Implications and Opportunities

Only educators can tip the scale.

- Produce AI-adept teachers
- Get existing educators up to speed
- Advance next generation learning science research



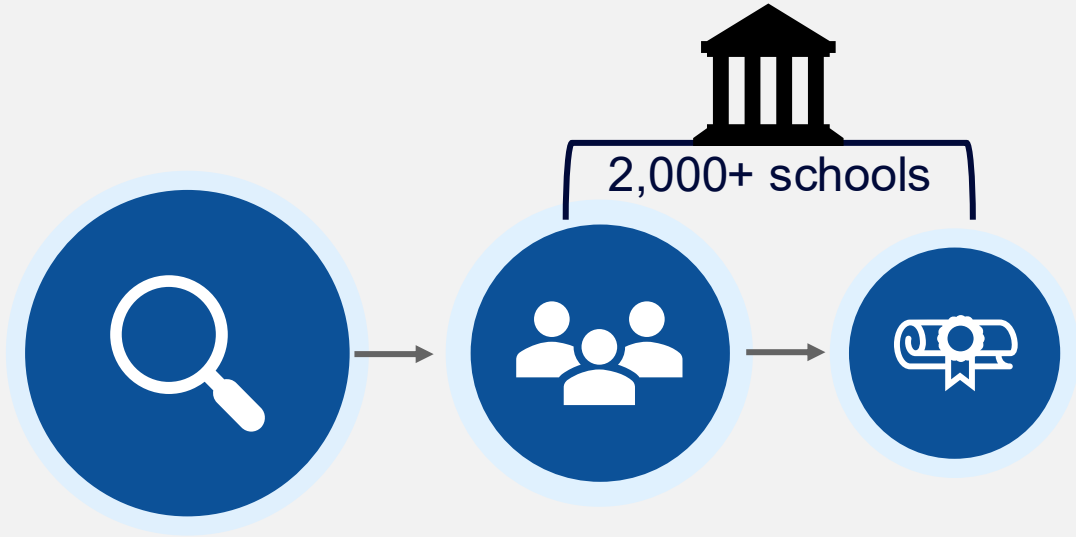
Implications and Opportunities

Producing AI-Adept Teachers

- Teacher preparation programs are a staple of higher education
- AI needs to be incorporated in program curriculum
  - **Why**, **How** and **When** to use AI in the classroom
- Tomorrow's educators will be teaching “AI Natives”
- State and federal guidance is emerging

Market Demand for Undergraduate Education Programs*

(CIP 13)



*Google searches for programs across all award levels
Source: Gray Decision Intelligence Program Evaluation System

University of Florida

AI Across the Curriculum

- Helped develop Florida's K-12 AI coursework and standards
- AI literacy and skills integrated into teacher preparation programs
- "AI Across the Curriculum" for all UF students

Immaculata University

Magic School AI Integration

- Integrating Magic School AI into teacher preparation programs
- Students learn to use AI for lesson planning, IEP differentiation, and parent communications
- *"We want our students to understand how to use AI tools to enhance teaching and learning."*

Implications and Opportunities

Getting Millions of Today's Educators up to Speed

- Applied AI programs for:
  - Teachers: AI tools and best practices in the classroom
  - Administrators: Curriculum Framework, Instructional Design, AI Policy, Operational Efficiencies
  - Staff: Student success, advising, career counseling, tutoring

> *"I believe AI is a great tool, but I would love more training with examples of how teachers use it."*
>
> -Lisa Theriault, Spanish Teacher,
> as quoted in The State of AI in Education 2025, Carnegie Learning

Millersville University

AI Teaching Endorsement

- Targeted to K-12 teachers
- Four-courses:
    1. Foundations of Artificial Intelligence in Education
    2. Teaching and Learning With Artificial Intelligence
    3. Ethical and Responsible Use of Artificial Intelligence in Education
    4. Leading and Integrating Artificial Intelligence Across the Curriculum

Univ of South Florida

Artificial Intelligence in Teaching & Learning

- Targeted to K-12 teachers, instructional professional, and education technologists
- Four courses / 12 credits
    1. Introduction to AI in Teaching & Learning
    2. AI In and Out of the Classroom
    3. AI in Curriculum Design, Planning, and Assessment
    4. Integrating AI into Your Teaching

Univ of Northern Iowa

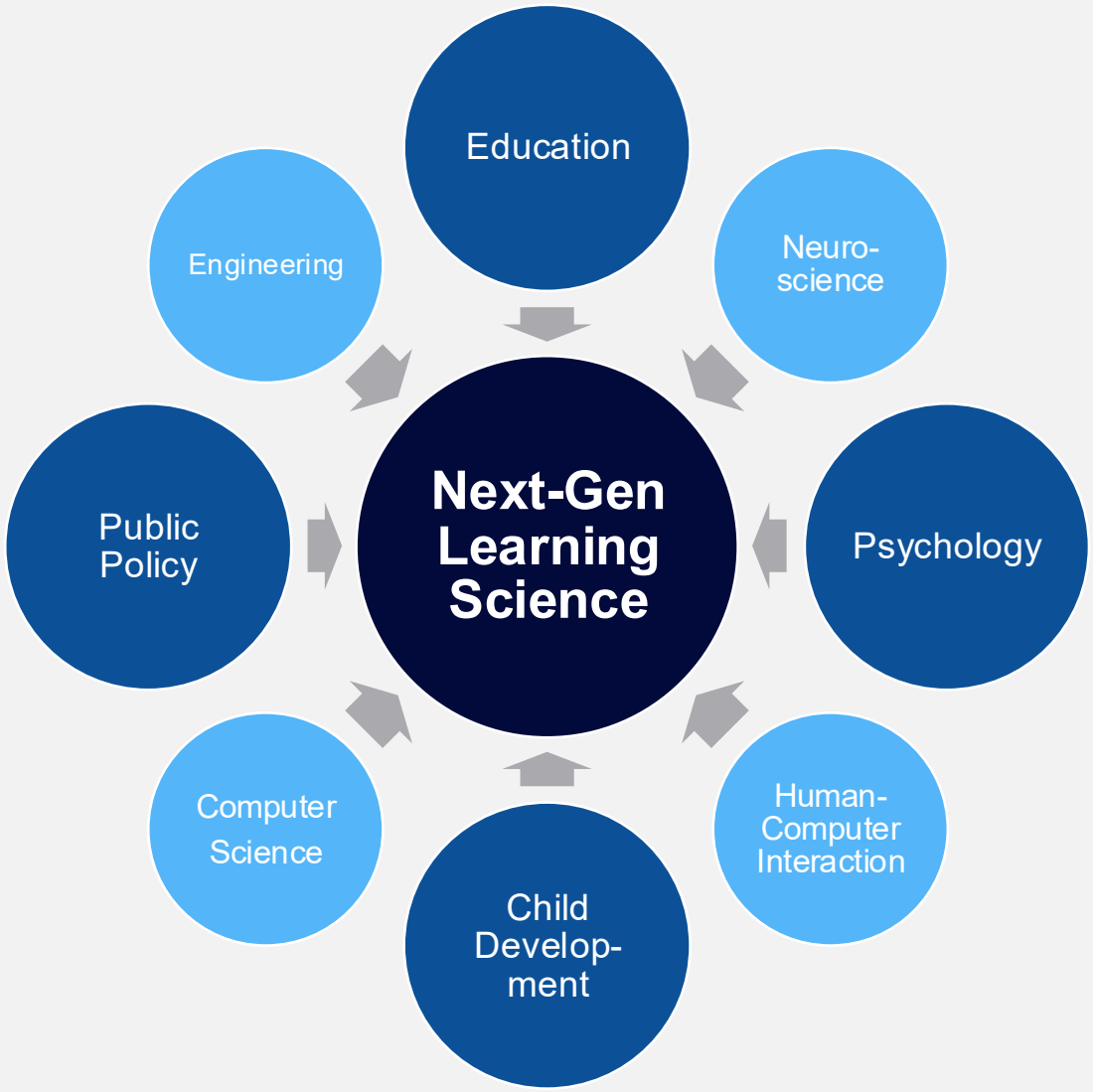
AI Teaching Endorsement

- Can be added as micro-credential within graduate programs
- Four courses / 12 credits
    1. Adapting and Creating Curriculum with AI
    2. Information Literacy: Learning to Question in the 21st Century
    3. Topics and Emerging Trends in Learning Technology
    4. The Ethics of Education in the Age of Technological Innovation

Implications and Opportunities

Next-Gen Learning Science

- *"Your brain on ChatGPT"?*
- Interdisciplinary approach
- Graduate and research-focused



Univ of Pennsylvania

MS.Ed, Learning Analytics and Artificial Intelligence

- Data analytics and AI to optimize teaching, learning, and assessment
- Develop learning technologies to enhance student outcomes and support teachers

University of California - Irvine

Master of Education Sciences (concentration in AI & Learning Analytics)

- Combine learning science with AI skills
- For professionals in education technology, research, or school districts

Stanford University

Stanford Accelerator for Learning: AI + Education Program

- Interdisciplinary research and collaboration
- AI literacy and learning experiences for educators
- AI + Education Summit

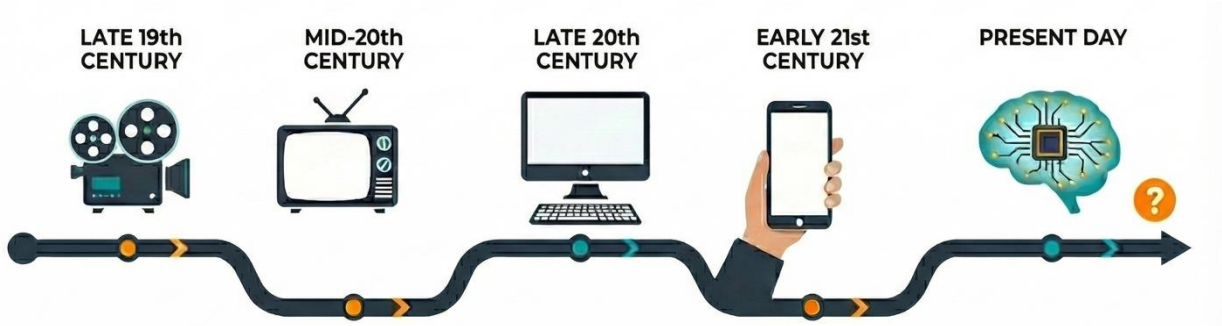
Carnegie Mellon University

Human-Computer Interaction Institute: Learning Sciences and Education Research Program

- Interdisciplinary research to improving “how people learn using technology”
- Combines insights from cognitive science, psychology, education, computer science, and design

We've done it before and can do it again.

- **Socrates in 370 BCE:** Writing will "create forgetfulness in the learners' souls, because they will not use their memories."



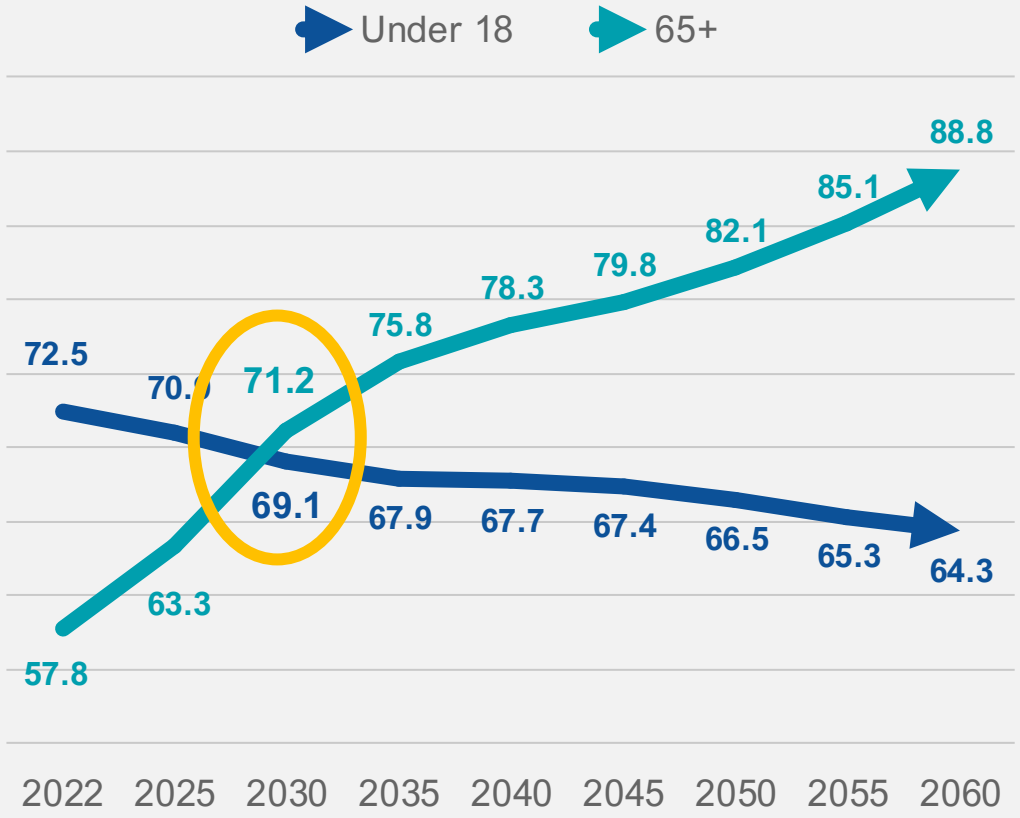
LONGEVITY

The Demographic Pivot

From Pyramid to Pillar

- By 2030, older adults will outnumber children for the first time in US history.
- Declining birth rates and longer life spans are inverting the population “pyramid”.
- ~1 in 4 people will be over 65 by 2050

US Population Projections By Age (Millions)



Source: U.S. Census Bureau, Population Division

A $118 Trillion Opportunity

The “Longevity Economy” is booming.

- Older adults contributed $45 trillion to global GDP in 2020.
- This is projected to more than double to $118 trillion by 2050.
- The US longevity economy is estimated at $7.1 trillion and growing.
- US adults 50 years and older hold 83% of household wealth and account for 53-56% of spending.

The Great “Unretirement”

Five Generations in the Workforce

- The traditional three-stage life is being replaced by a multi-stage life.
- Retirement is becoming more fluid, with people working longer and re-entering the workforce.
- Workers in their 40s, 50s, and 60s need "mid-career re-skilling" to remain relevant in a digitized economy.

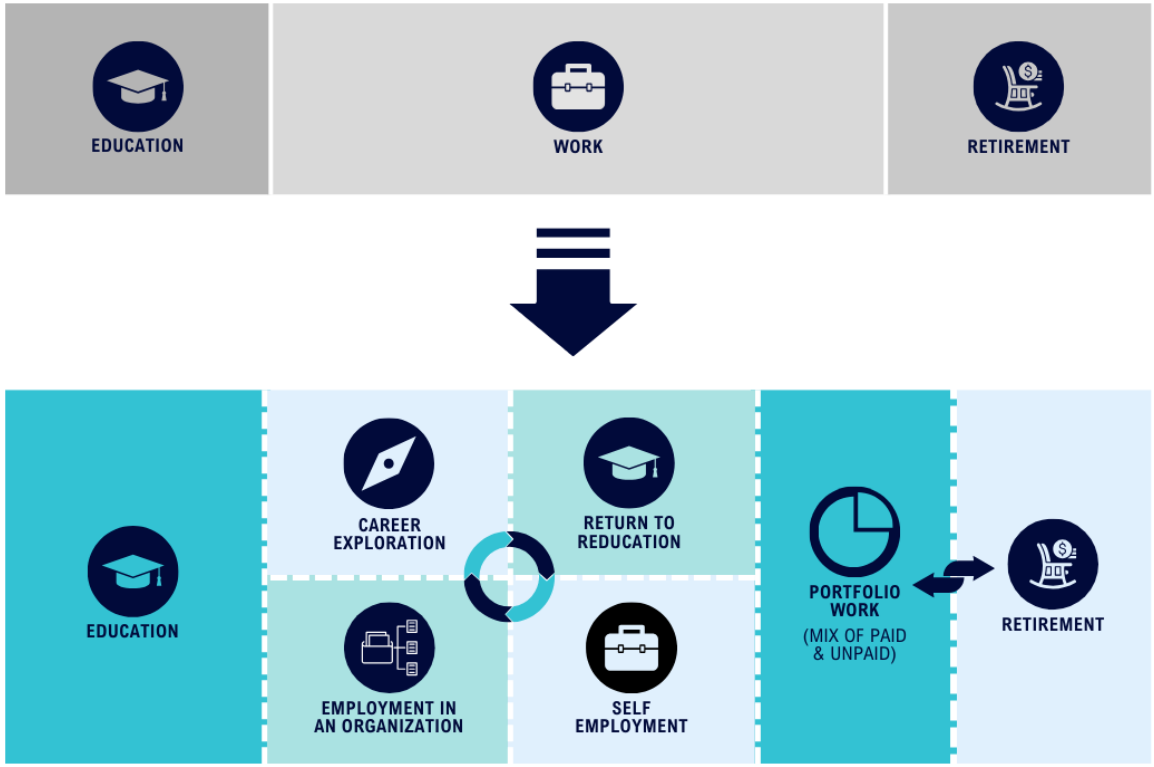


Image based on Gratton, J., & Scott, A. (2017). The corporate implications of Longer Lives, *MIT Sloan Management Review*

Lifespan versus Healthspan

The Healthspan Gap and Care Crisis

- Focus on living better for longer
- Healthspan gap of 12.4 years
- $172,500 spent on healthcare in retirement
- Shortage of caregivers

Implications and Opportunities

Enrolling Lifelong Learners

- Episodic learning versus “one-and-done”
- University of Washington “60-Year Curriculum”
- Osher Lifelong Learning Institutes (OLLIs)
- The Age-Friendly University (AFU) Network
- University Retirement Communities

Implications and Opportunities

Business, Society, & Policy

- Long-term care administration and management
- Public policy / sociology
- AgeTech product innovation and design

University of Maryland Baltimore County

BA, Management of Aging Services
MA, Management of Aging Services

- Combines business management, public policy, and the study of human aging.

University Texas San Antonio

BS, Health, Aging and Society

- Explores sociological and policy aspects of health and aging

University Southern California

MS, Applied Technology and Aging (MSATA)

- Technological innovations to support older adults

Implications and Opportunities

From Gerontology to Geroscience

- *Gerontology* seeks to manage the decline associated with age.
- *Geroscience* seeks to intervene in the aging process itself to prevent or delay age-related conditions and diseases.
- Senolytics target “zombie” cells that are linked to physical deterioration and age-related conditions.
- Research is moving from animal to human trials.

University of Southern California

Leonard Davis School of Gerontology

PhD, Biology of Aging
Master of Science in Aging Biology (MSAB)

- Researching the cellular, molecular, and genetic mechanisms of aging
- Applying big data analytics to develop treatments and inform strategies to prevent age-related diseases.

Northwestern University

Potocsnak Longevity Institute

Human Longevity Laboratory

- Precisely measuring biological age in humans
- Leveraging data to develop AI-based tools aimed at identifying the markers of healthy aging
- Testing interventions to potentially slow the aging process

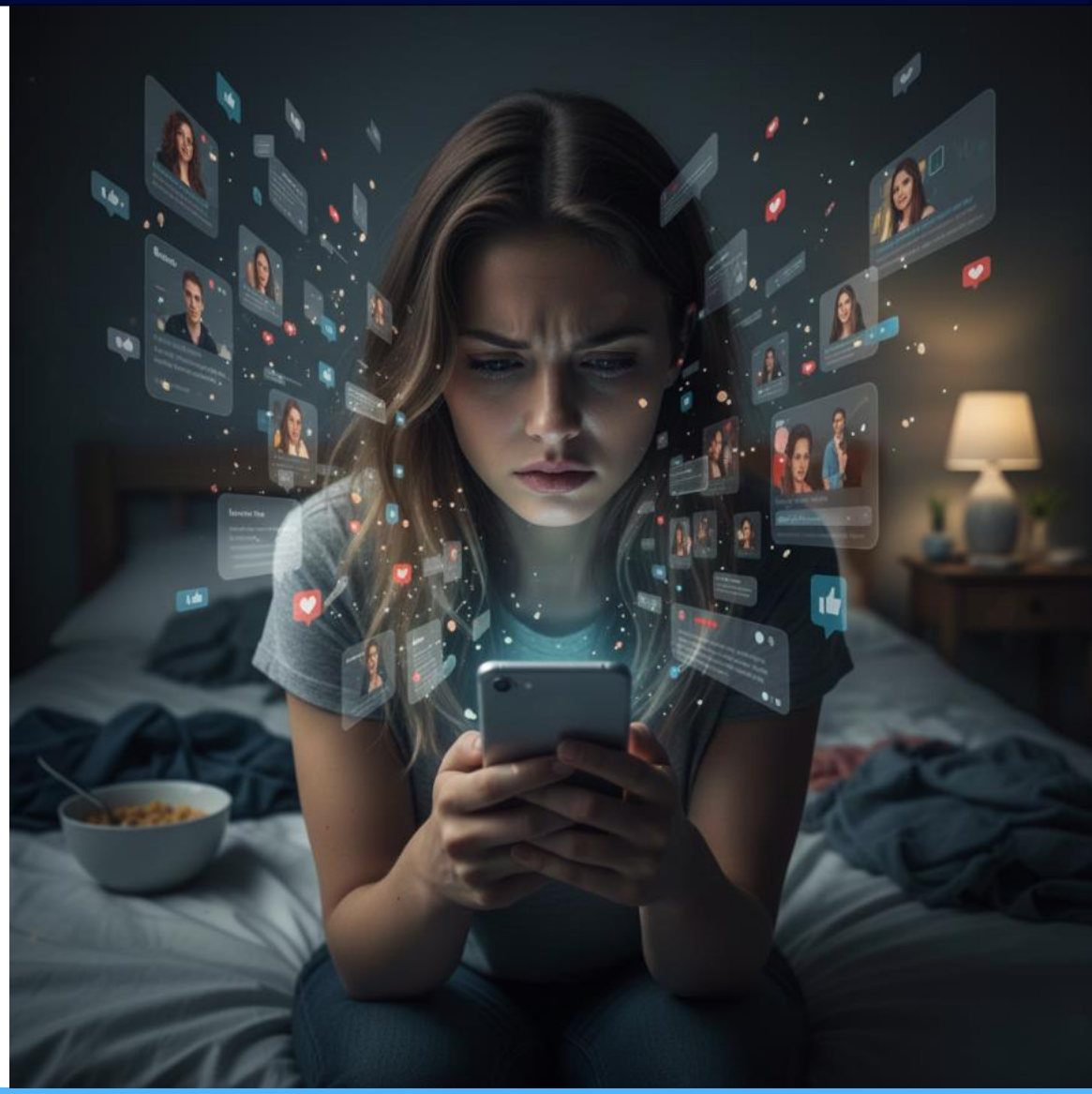
UNPLUGGED

The Attention Economy

- People spend over seven hours per day on screens
- Attention spans are shrinking
- The Attention Economy is leading to digital fatigue

The Anxious Generation(s)

- “Brain rot” and “rage bait”
- Excessive screen time impacting mental health
- Americans are lonelier than ever before



The Digital Detox Movement

Premiumization of Experience

Growth of in-person / offline activities

- Sports and outdoor recreation
- Concerts and live entertainment
- Board games / silent book clubs / third spaces

Growing awareness of “digital wellbeing”

- Mindfulness
- Nature-based therapy
- “touch grass”

Implications and Opportunities

Niche Programs/Specializations

- Sports Management / Hospitality / Event Planning
- Outdoor Recreation / Business
- Ecopsychology / Ecotherapy
- Cyberpsychology / Digital Wellbeing

Plymouth State University

BS, Adventure Education

- Total immersion and “unplugged” learning
- Emphasis on human-powered engagement
- Preparation for therapeutic settings
- Career pathways in “analog” environments

University of New England

BS, Outdoor Business and Innovation

- Championing the offline economy
- Designing the ”gear" for disconnection
- Professionalizing the “return to nature”

Lewis & Clark College

Ecopsychology Graduate Certificate

- Launched fall 2023
- Designed for mental health professionals
- Includes a "Wilderness Immersion" course

Monmouth University

MS, Clinical Mental Health Counseling (Ecotherapy Specialization)

- Adventure-based Ecotherapy
- Counseling with nature

Norfolk State University

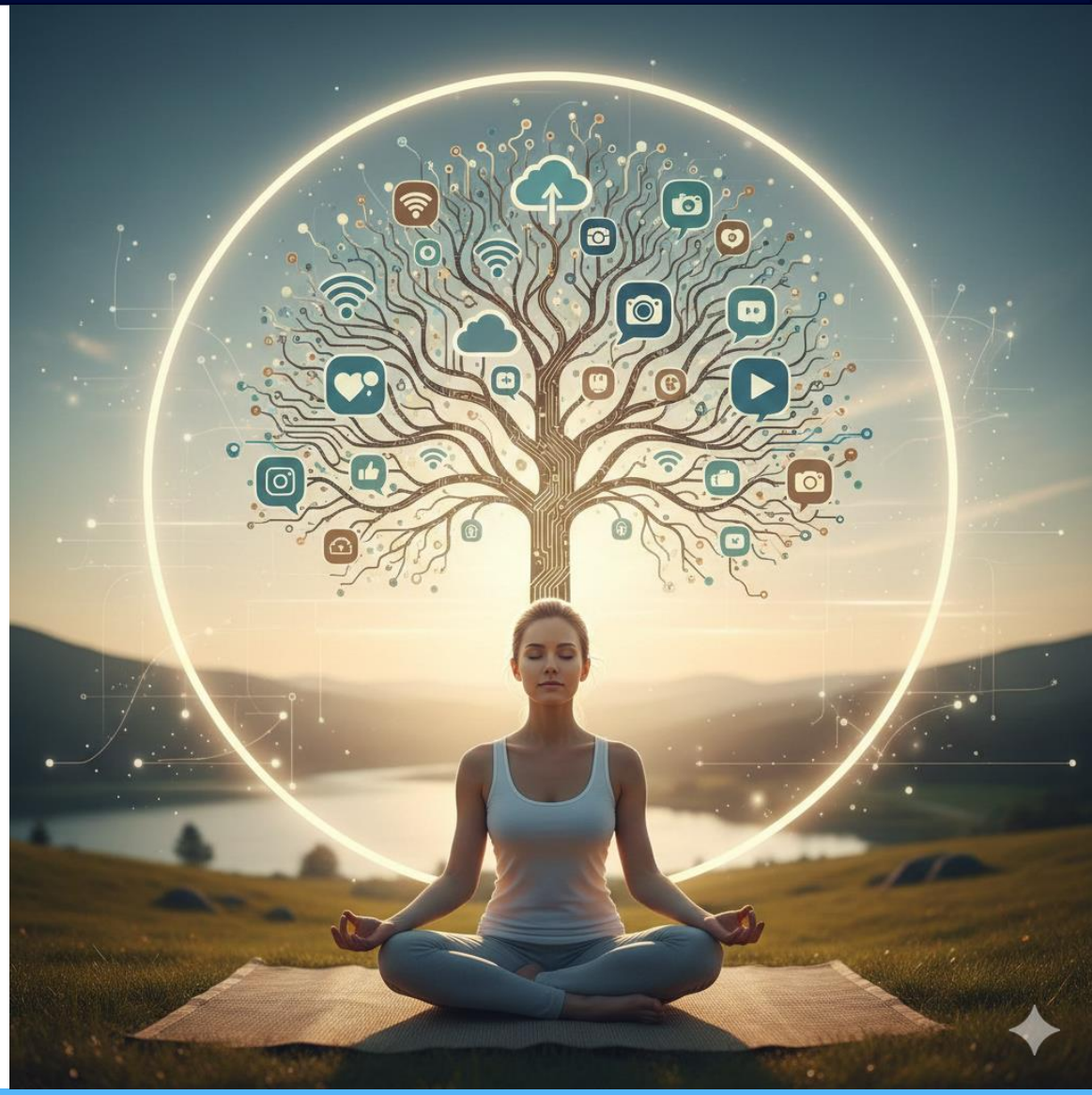
MS in CyberPsychology

- Studies how the digital world affects human behavior
- Also available as a graduate certificate (Behavioral Emphasis)

Georgetown University

Digital Wellbeing

- Research program within the Center for Data and Ethics
- Impact of digital technology on mental and physical health, work, and play




BLINK-182
PEOPLE IN 1999 USING THE INTERNET TO
ESCAPE FROM REALITY


PEOPLE IN 2026 USING REALITY TO
ESCAPE FROM THE INTERNET

Gray Decision Intelligence Upcoming Events

Master Class Series (Coming in March)

Date	Topic
Tues., March 10th	Higher Ed in the 2020s: Myths and Realities
Tues., March 17th	Market Demand for Academic Programs
Tues., March 24th	Program Economics and Outcomes
Tues., March 31st	Predicting Program Size and Remix of Existing Programs
Tues., April 7th	Innovations in Academic Program Evaluation

Scan to Register

Register for Our 2026 Master Class Series

Can't scan? Type this link:

graydi.us/2026-master-class-series

Gray Decision Intelligence Upcoming Events

Monthly Webinars

Date	Topic
Thurs., January 29	Higher Ed Demand Trends

Register for Upcoming Monthly Webinars

Can't scan? Type this link:

graydi.us/upcoming-events

Scan to Register