GRAY™
DECISION INTELLIGENCE

Five Emerging Programs for 2024



January 11, 2024

Leading-Edge Software for Higher Education

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



Economics and Outcomes

Optimize Performance



Markets

Inform Program Decisions



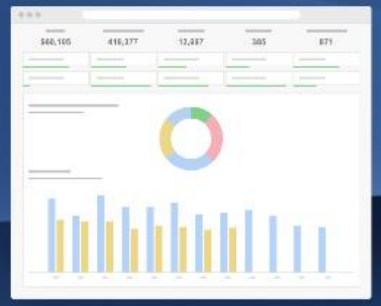
Academic Management

Data-Informed Evaluation



GeoTargeting

Increase Marketing ROI



Data Dashboards

Customizable Data Displays

Today's Presenters



MaryAnn Romans
Director, Marketing



Elaine Millar Rowles
Sr Director, Research



Zach Paz
COO & EVP, Product



Ned Caron
SVP, Marketing



Mary Pahissa Upchurch
EVP, Customer Success



Monica Bilson
Project Manager



Lisa Piatek
SVP, Business Development

Early Stage

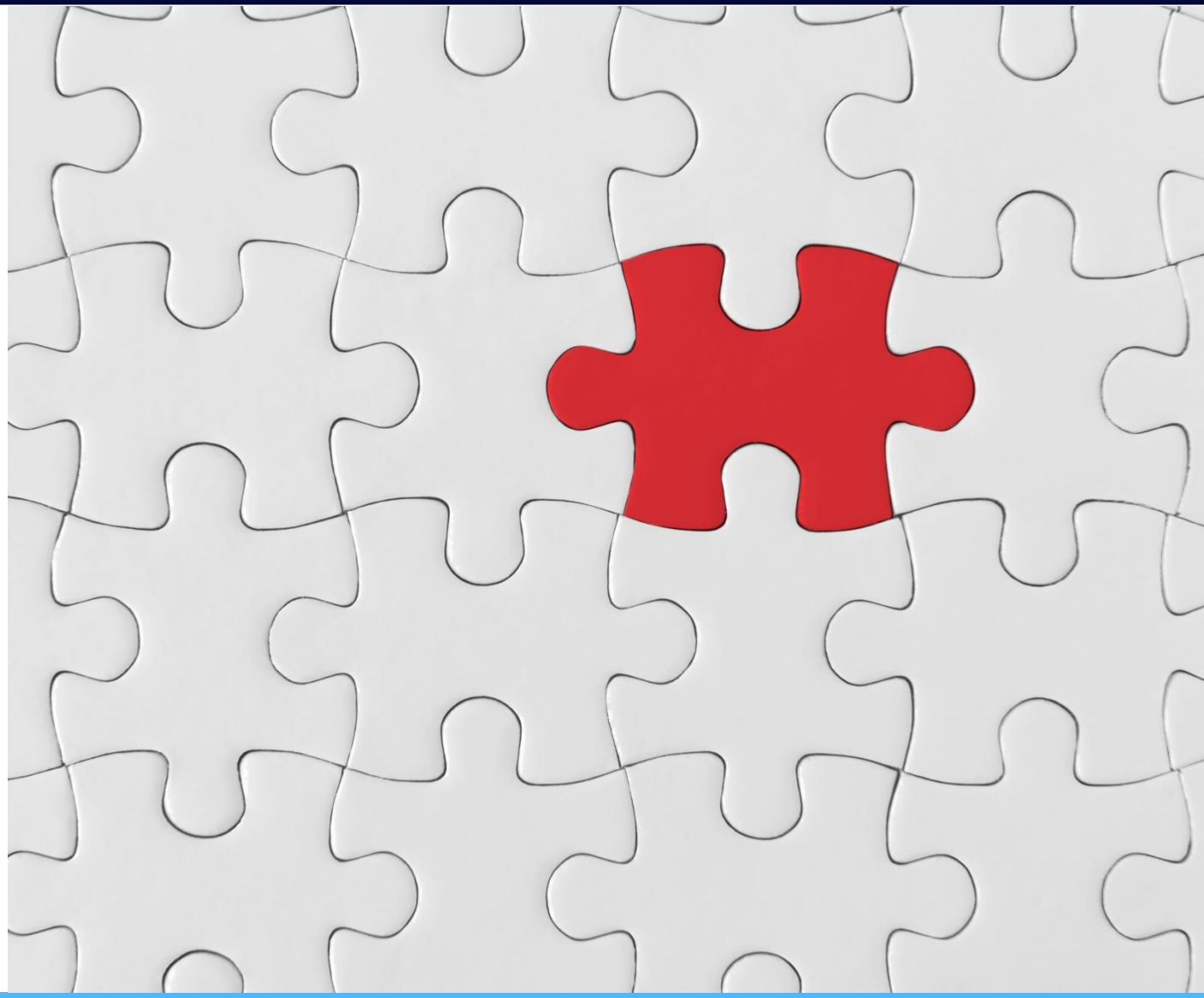
Forming

Speculative



Elements to Consider

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



Blasts from the Past


Creative AI

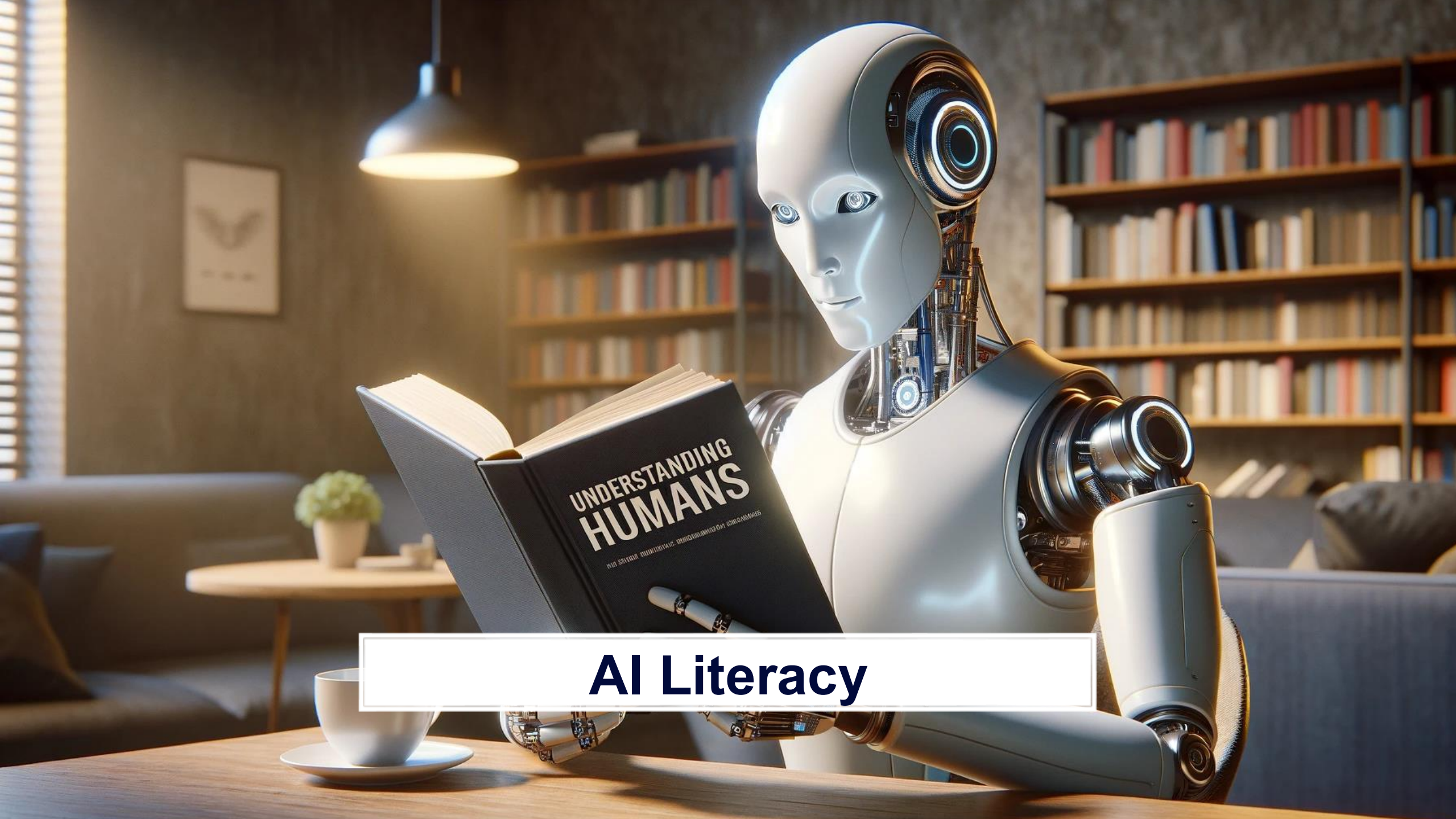


Disinformation Intelligence


Creator Economy


Space Commercialization


Cannabis



AI Literacy

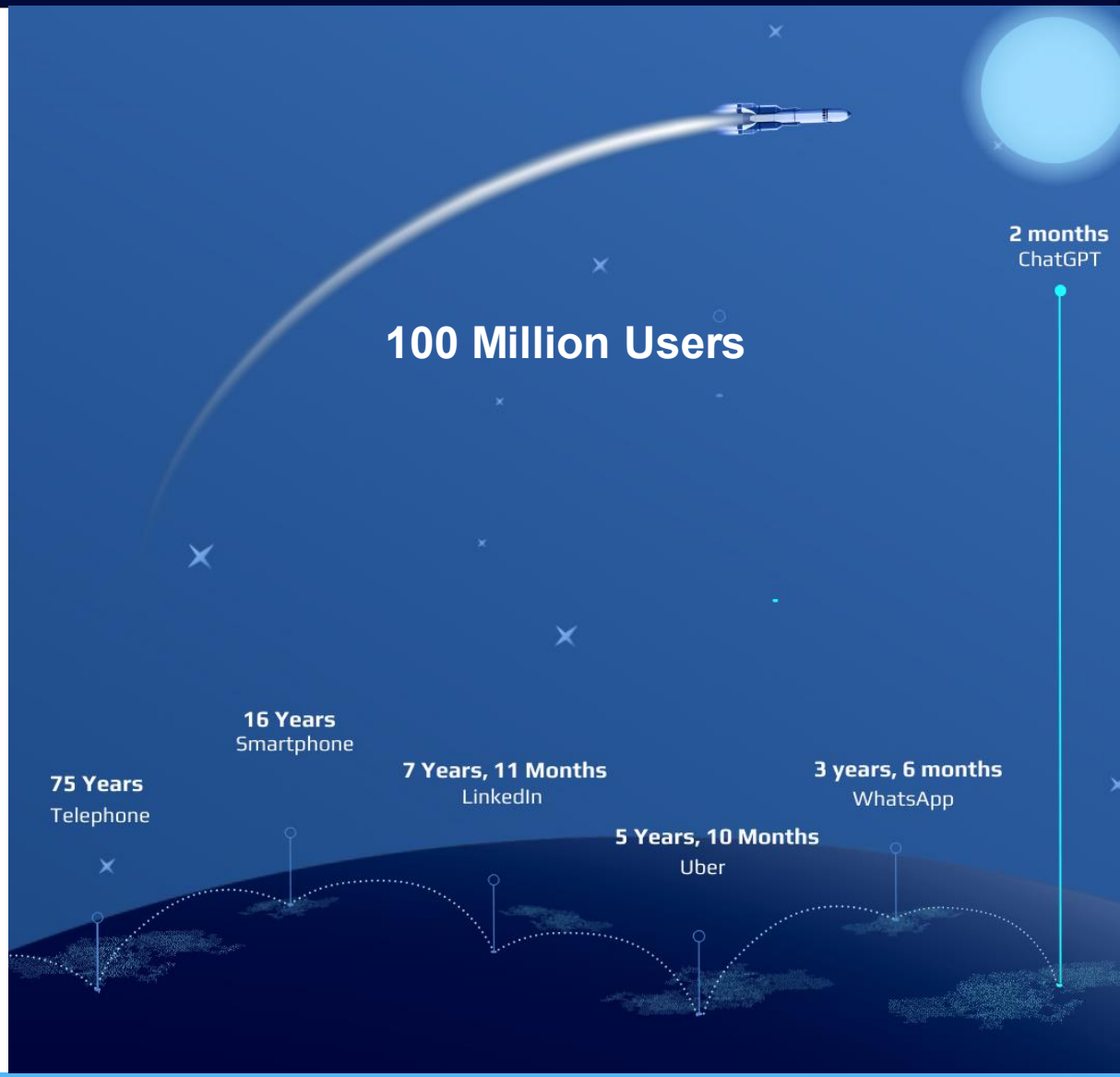
AI Literacy is the New Digital Literacy

- Generative AI tools are proliferating.
- They can write, draw, and even produce code.
- Anyone and everyone has access.



Everything, Everywhere, All at Once

- The **speed** of innovation is accelerating.
- ChatGPT reached 100 million users in **two months**.
- The time to act is **now**.

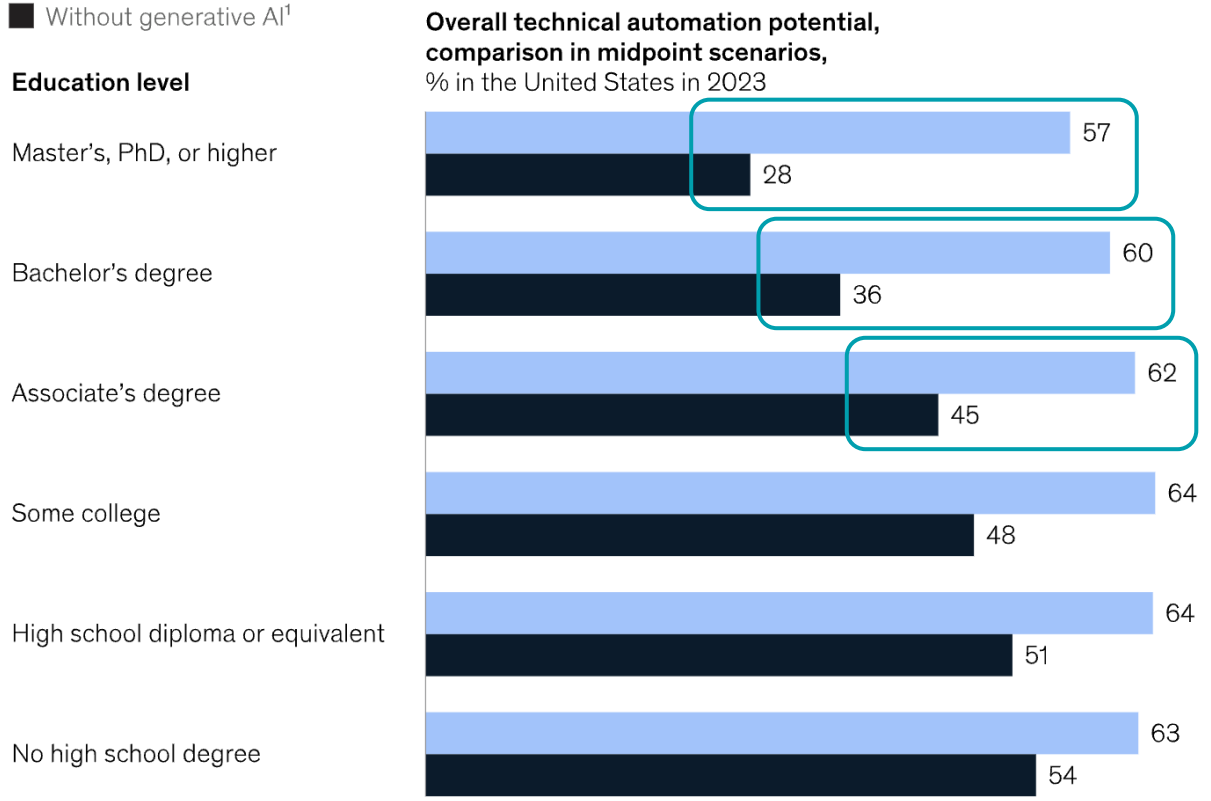


Adapt or Be Automated

- AI will impact **knowledge workers**.
- Some jobs will be **automated**…
- …and other jobs will be **created**.

Impact of generative AI on technical automation potential in midpoint scenario, 2023

With generative AI
Without generative AI[1]



[1]Previous assessment of work automation before the rise of generative AI.
Source: McKinsey Global Institute analysis

McKinsey & Company

AI Literacy for Institutions

- Teaching and learning
- Administrative operations
- Strategic innovation



AI Literacy as Academic Programs

- Courses and short certificates
- Executive education
- Employer partnerships
- AI Literacy as a Gen Ed

Davidson College
AI Prompt Engineering for Beginners

Arizona State University
AI Foundations: Prompt Engineering with ChatGPT

Vanderbilt University
Prompt Engineering Specialization

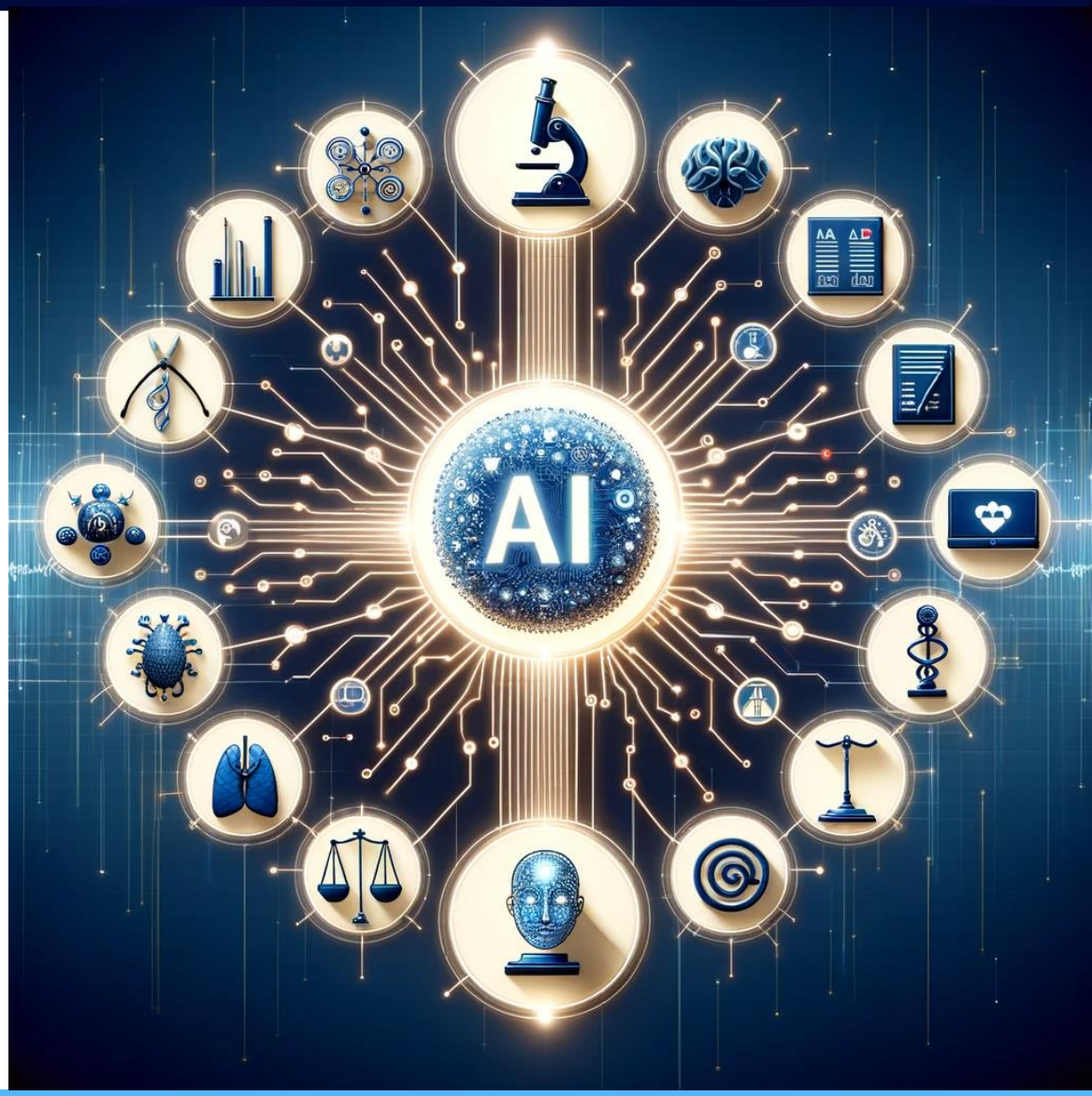
Cornell University
AI Strategy Certificate

Miami Dade College
Artificial Intelligence Practitioner Certificate
Artificial Intelligence Awareness Certificate


Applied AI

AI Applied to Specific Disciplines

- Applied AI combines technical expertise in artificial intelligence.
- With domain knowledge in a specific discipline
- To accelerate innovation and strategic advantage.



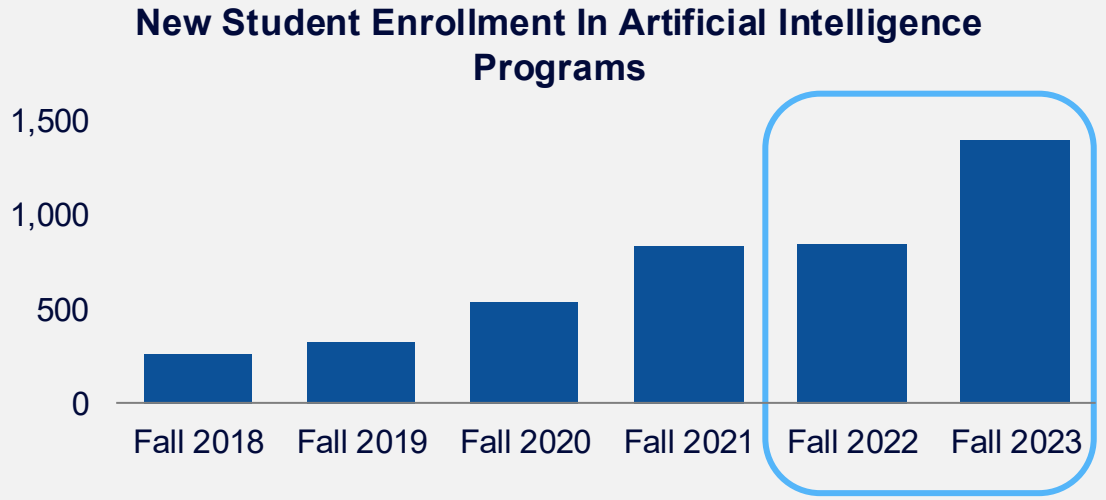
The Opportunity

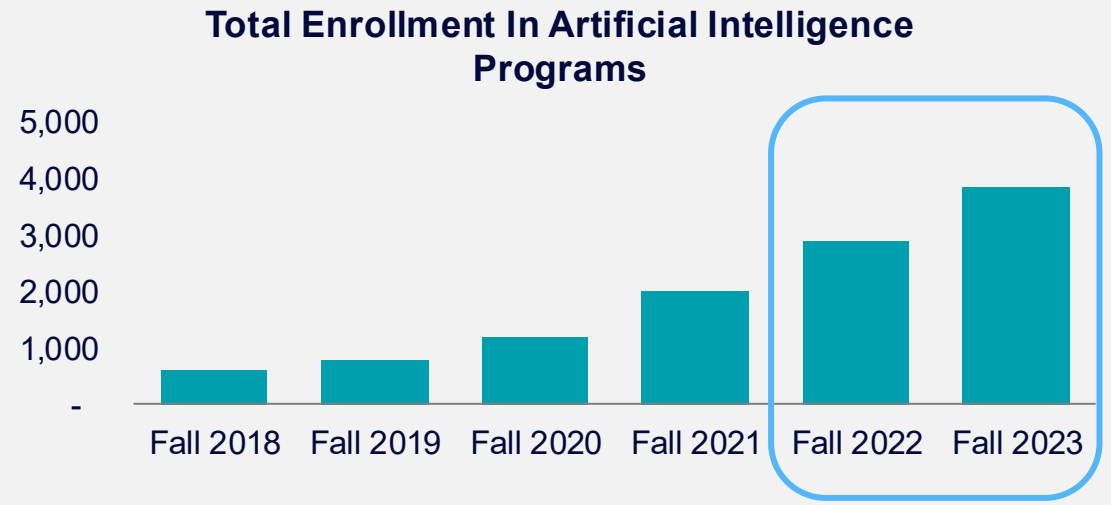
- AI's global economic impact expected to be in the **trillions**
- **AI talent** is – and will continue to be – in high demand.
- **Institutions** can lead the way in developing new talent and upskilling the current workforce.



Artificial Intelligence Programs

- Teach students how to build AI systems and applications.
- New student **enrollment was up 64%** in fall 2023.
- At least **19 new AI programs** announced in 2023





Source: Gray Decision Intelligence Program Enrollment Dashboard

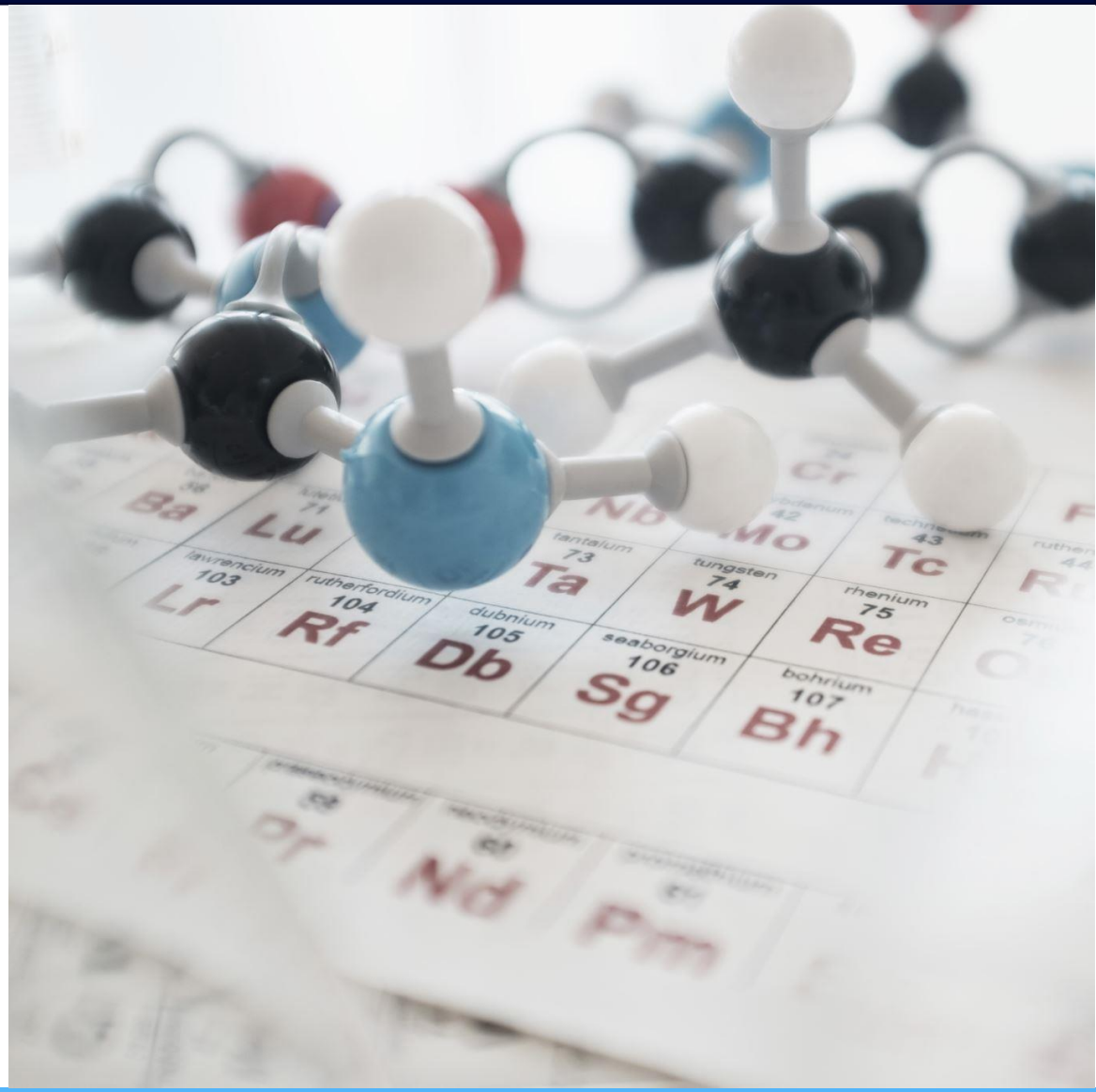
Marketing in the Age of AI

- Content
- Analytics
- Targeting
- Personalization



Materials Science in the Age of AI

- Accelerating **research and development**
- Discovering **novel** materials
- Identifying suitable **applications**



Quote: New Atlas.com; November 29, 2023

General Opportunities

- Interdisciplinary programs
- Master's programs in Artificial Intelligence
- MBAs and Marketing specializations
- Undergraduate programs
- Executive education

UT Health San Antonio
Doctor of Medicine & MS in Artificial Intelligence

Northeastern University
MPS, AI for Business Ventures
MPS, AI for Finance
MPS, AI for Healthcare
MPS, AI for Human Resources

Chandler-Gilbert Community College
Artificial Intelligence and Machine Learning, Bachelor's

Miami Dade College
Applied Artificial Intelligence – Bachelor's
Applied Artificial Intelligence – Associate



Technology and Policy

From Light Speed to Warp Speed

- How do we harness the benefits while minimizing harms?
- What are the rules of the road?



It’s Real, it’s Here, and it’s Pervasive

- Big data
- Self-driving cars
- Healthcare and precision medicine
- Media and creative content



AI: The Elephant in the Policy Room

- Unbalanced control
- Access to information
- “Defending reality”
- Bias



Many Policy Areas to Consider

Is it government, private sector, or both?

- Safety standards
- Intellectual property rights
- Labor and employment
- Data privacy and consumer protection
- Ethical guidelines



Technology Policy in Higher Education

- Undergraduate and graduate programs
- Interdisciplinary programs
- Concentration within Public Policy programs
- Specialization within computer science, engineering, or healthcare degrees
- Executive education

ASU College of Global Futures, School for the Future of Innovation in Society
Graduate Certificate Responsible Innovation in Science, Engineering, and Society

Carnegie Mellon University
Bachelor of Arts in Science, Technology, and Public Policy

Massachusetts Institute of Technology
Master of Science in Technology and Policy

Stanford University
MS in Public Policy concentration in Science and Technology Policy

Worcester Polytechnic Institute
Bachelor of Science in Society, Technology, and Policy


Regenerative Medicine

Regenerating the Body to Heal Itself

- Gene therapy
- Tissue engineering
- Stem cell therapy
- Molecular repair
- Immunomodulation therapy
- Senolytics



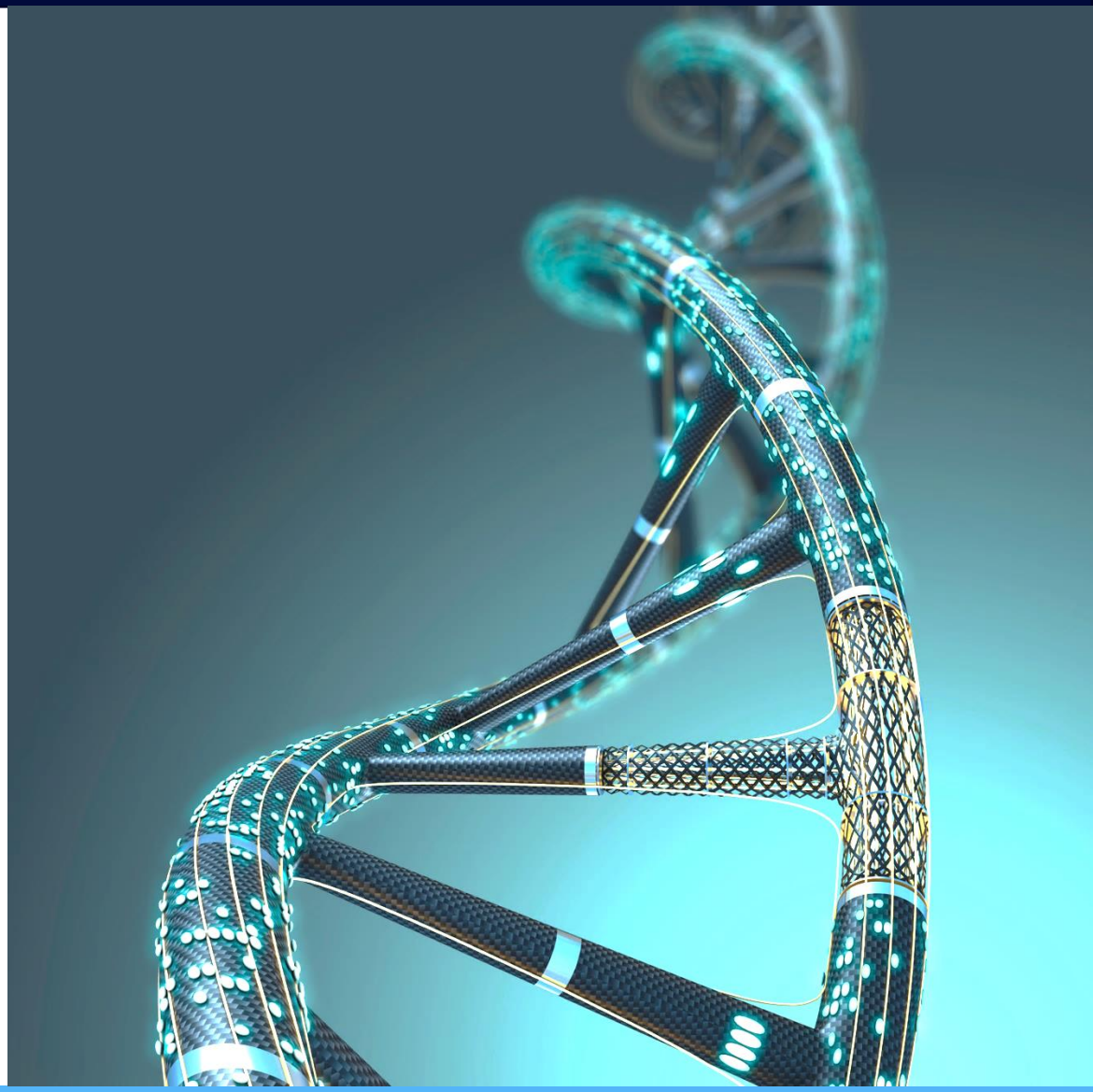
Widespread Applications

- Tissue and organ regeneration
- Disease treatment
- Orthopedics and sports medicine
- Wound healing
- Dermatology and plastic surgery
- Ophthalmology
- Treating genetic disorders
- Precision medicine



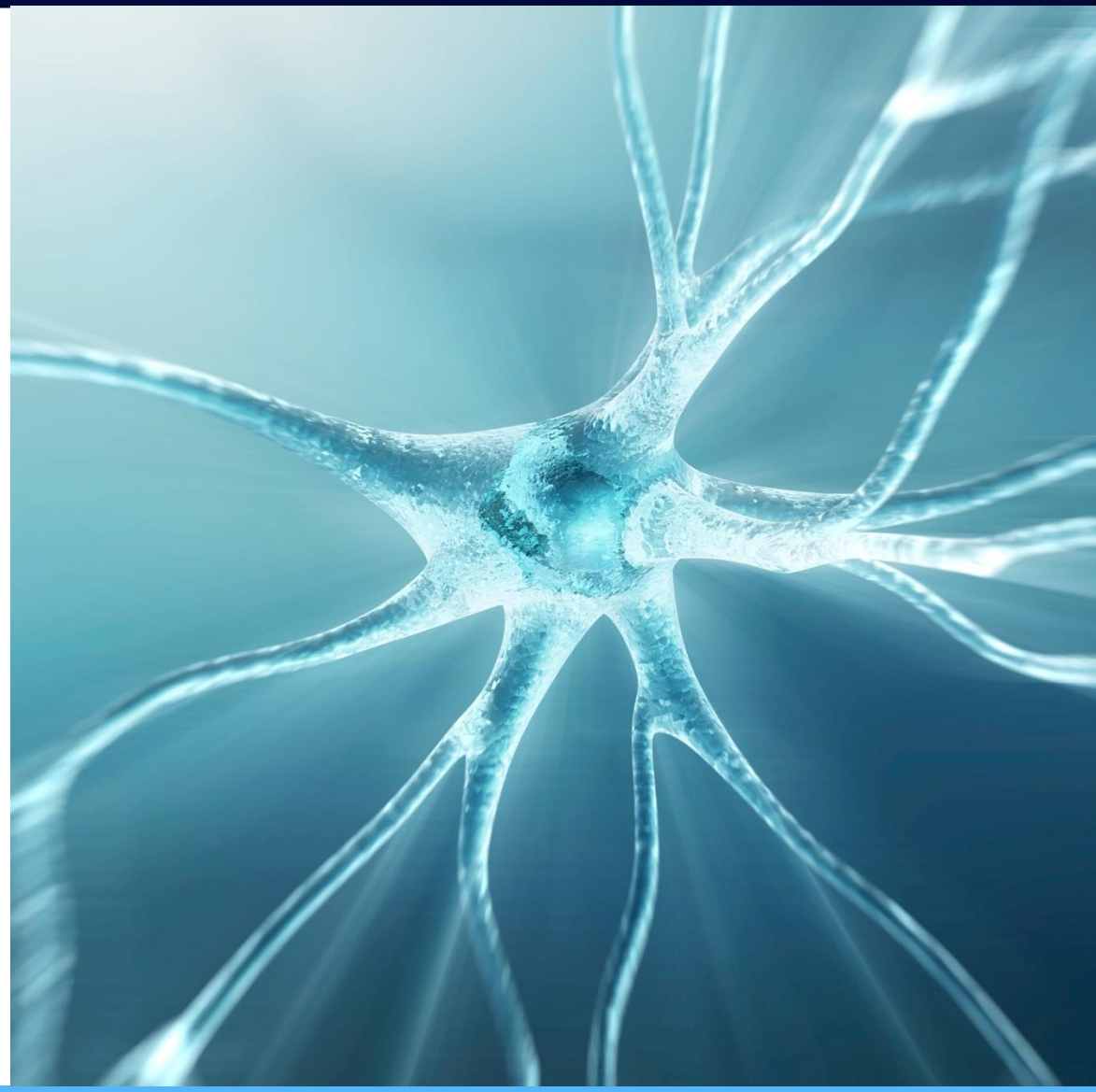
From Theory to Clinical Practice

- **Gene Therapy** for Sickle Cell Disease
- First **FDA-approved** CRISPR-based gene therapy
- CRISPR “edits” stem cells in a way that inhibits hemoglobin from sickling cells.



Stem Cell Therapy to Regrow Cartilage

- Cartilage has limited capacity to self-repair.
- RECLAIM technique has successfully regrown patient's cartilage using adult stem cells.
- It could have widespread applications for sports medicine and age-related degeneration.



Stay Healthier Longer

- Senolytics clear the body of senescent cells.
- Help re-establish normal function in healthy cells
- Slow the onset of age-related diseases



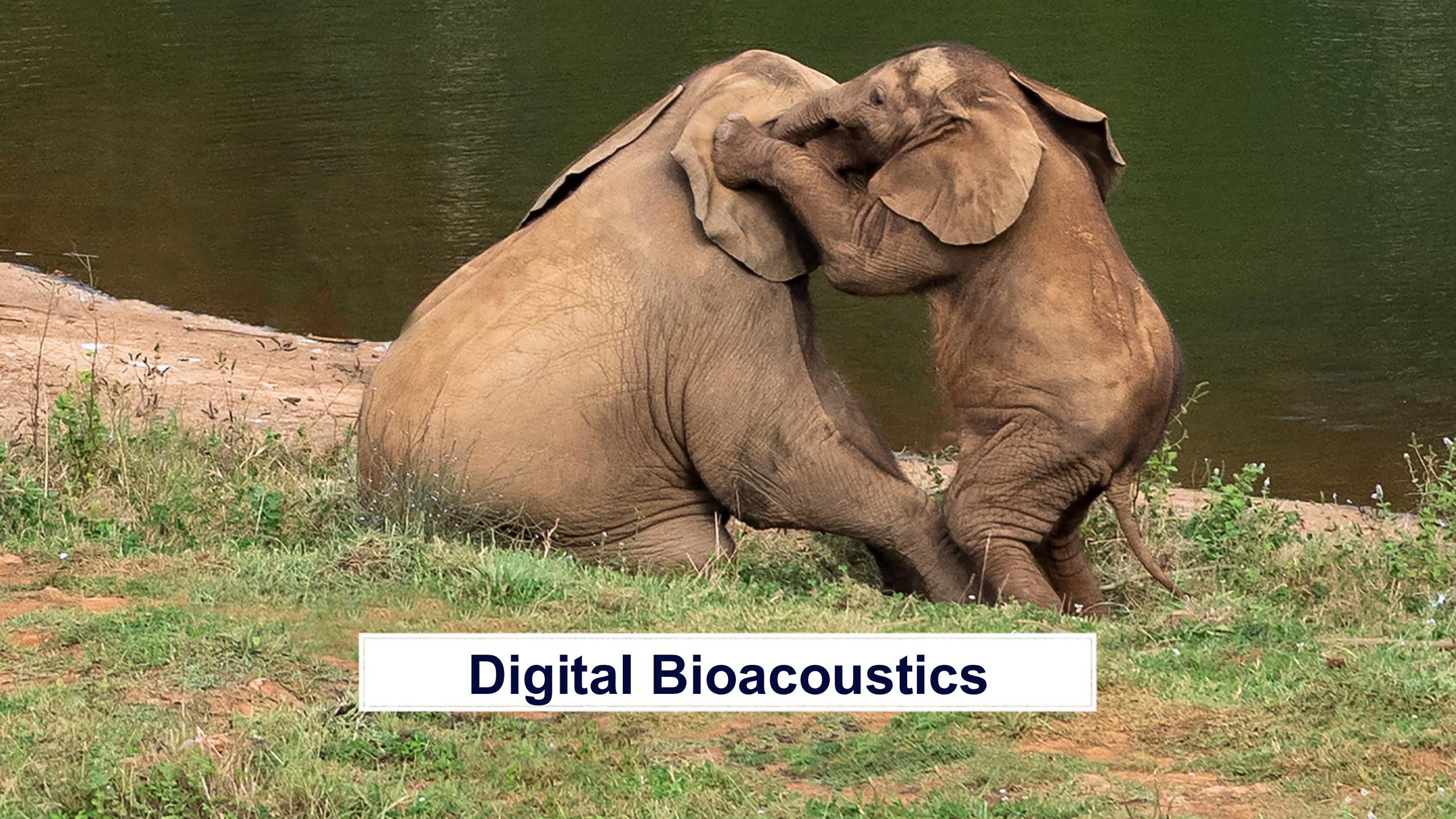
Regenerative Medicine in Higher Education

- Grant-funded research
- Doctoral and master's programs
- Specialized undergraduate programs
- Embedded into existing curriculum

Loma Linda University:
MS, PhD - Cancer, Developmental, and Regenerative Biology

California Polytechnic State University:
MS, Biological Sciences, Specialization in Regenerative Medicine

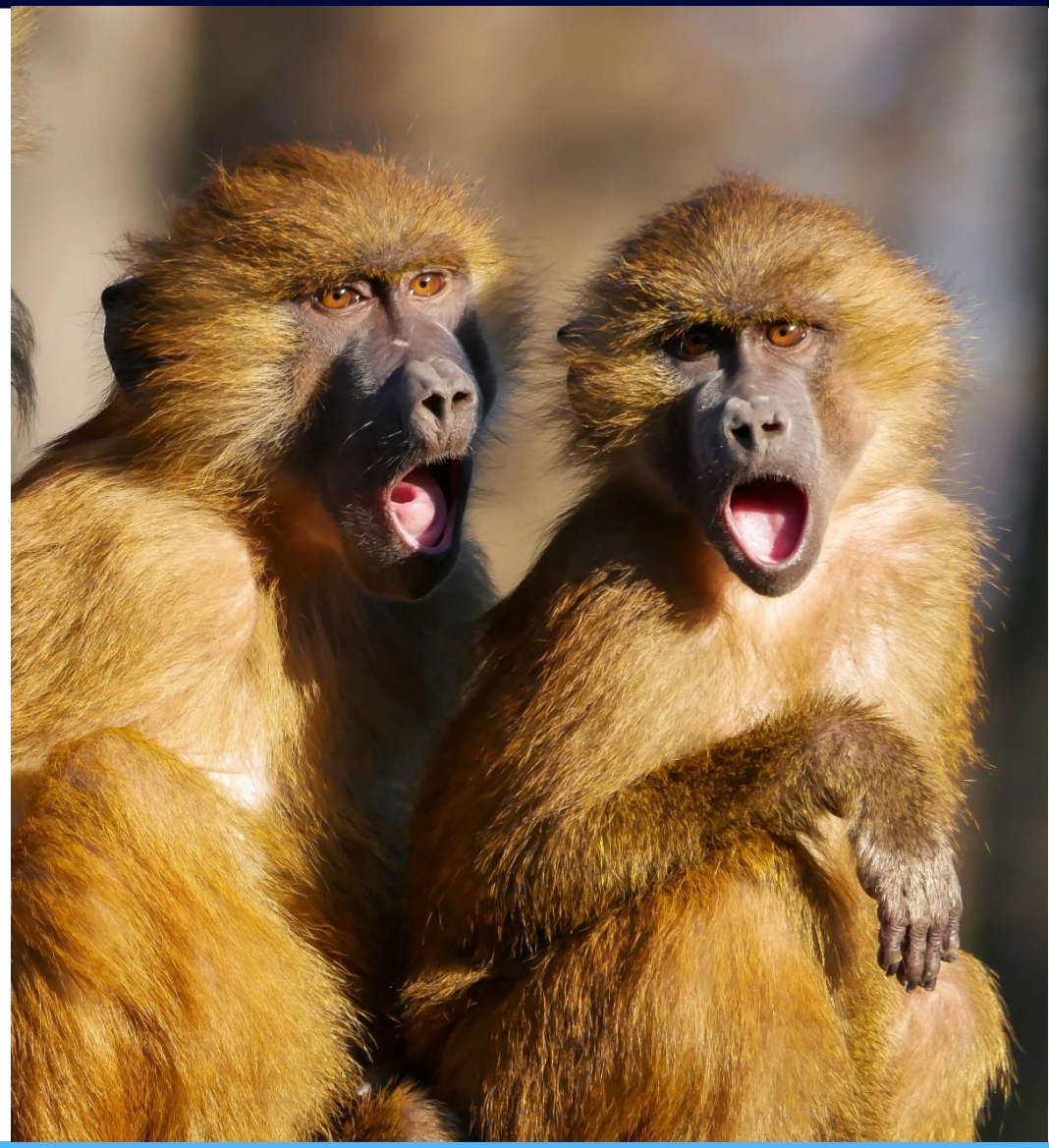
Johns Hopkins University:
MS, Regenerative and Stem Cell Technologies



Digital Bioacoustics

Decoding Animal Communication

- Recording, analyzing, and interpreting sounds produced by living organisms
- Mammals, reptiles, fish, and insects
- Sounds in forests, plains, cities, oceans



Technological Advances are Driving Discoveries

- Small and low-cost **acoustic devices** can capture sounds in various environments.
- **Computers** can now store the vast amounts of sound data captured by the devices.
- **Large language models (LLMs)** analyze the data, identify patterns, and decode the meaning behind them.



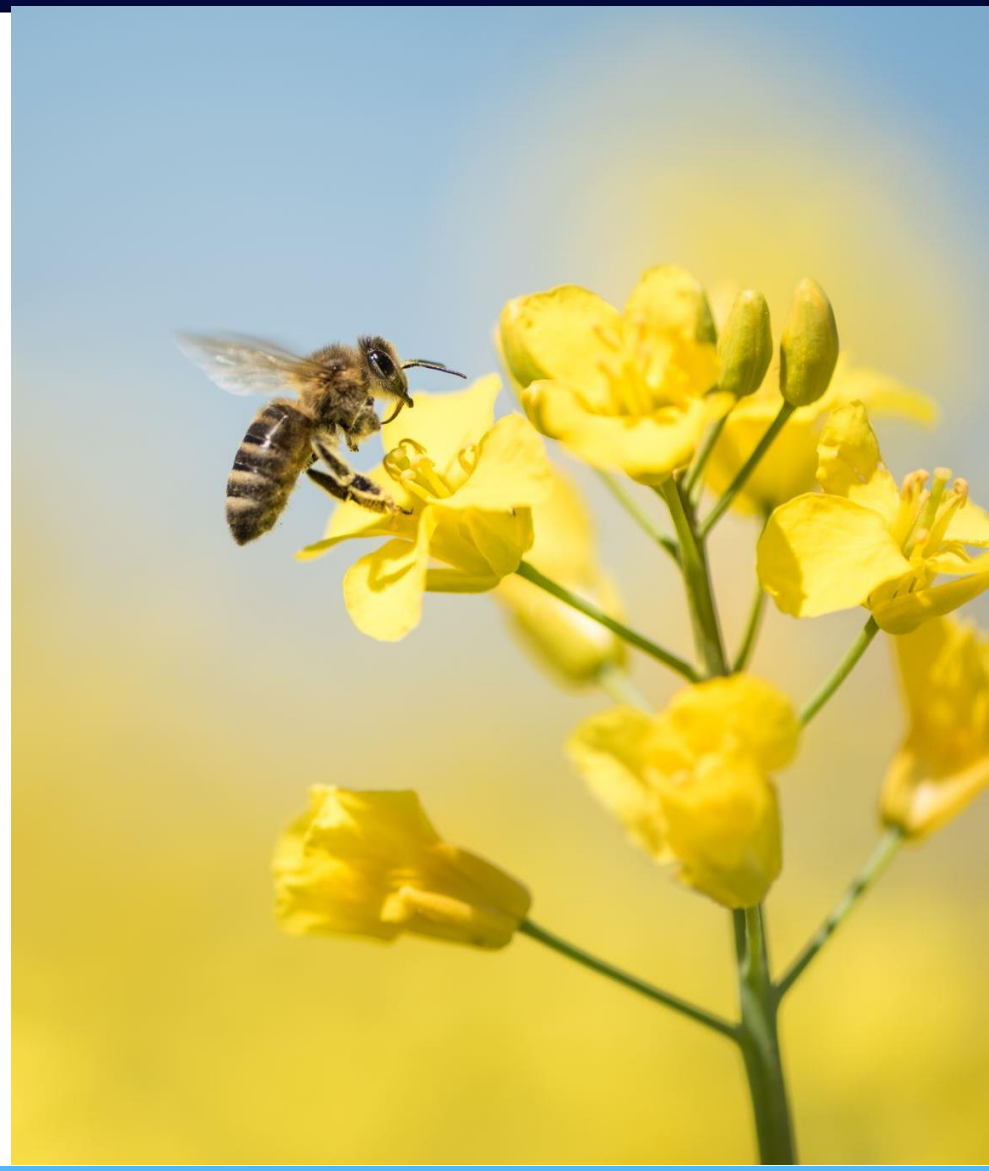
Decoding Bat Communications

- **Sensors and monitors** recorded vocalizations and video of fruit bats.
- **Voice-recognition** software analyzed the sounds.
- **Natural language processing** software detected patterns in the communications.
- **Algorithms** correlated specific sounds with social interactions captured on video.
- Researchers classified and **“decoded”** sounds to decipher the meaning or intent behind them.



Potential Applications

- Species identification and monitoring
- Environmental monitoring
- Threat mitigation
- Agricultural advances
- Help for the honeybees?
- Communicate with your pets?



Digital Bioacoustics in Higher Education

- Doctoral research
- Interdisciplinary programs
- Specializations
- Technical certificates

Cornell University
Cornell Lab of Ornithology

The Ohio State University
Borror Laboratory of Bioacoustics
AI and Biodiversity Change Global Climate Center

Purdue University
Center for Global Soundscapes

University of California, Santa Cruz
Long Marine Lab

Gray Decision Intelligence Free Resources

Upcoming Webinars

Topic	Date
Demand Trends Webcast: Community Colleges	*Wednesday Jan. 24th* at 2 PM ET
Demand Trends Webcast: Bachelor's and Above	*Thursday Jan 25th* at 2 PM ET

Website: https://www.graydi.us/

Podcast

Grow Grow Grow:
Growth Strategies in Higher Education



Coming in March!
Learn from the experts.

Date	Topic
Tues., March 5	Introduction to Academic Program Evaluation
Tues., March 12	Market Demand
Tues., March 19	Economics and Curricular Efficiency
Tues., March 26	Academic Program Management
Tues., April 2	Advanced Analytics

Register here:
https://www.graydi.us/2024-master-class-series

