



California Community Colleges

# Generative AI in the California Community Colleges

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## **South Central Coast Regional CTE Consortium**

Allan Hancock College | Antelope Valley College |  
College of the Canyons | Cuesta College |  
Moorpark College | Oxnard College | Santa  
Barbara City College | Ventura College

June 14, 2024

Resize and add Don's headshot, name, & title

AI Strategic Lead

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Visiting Executive,  
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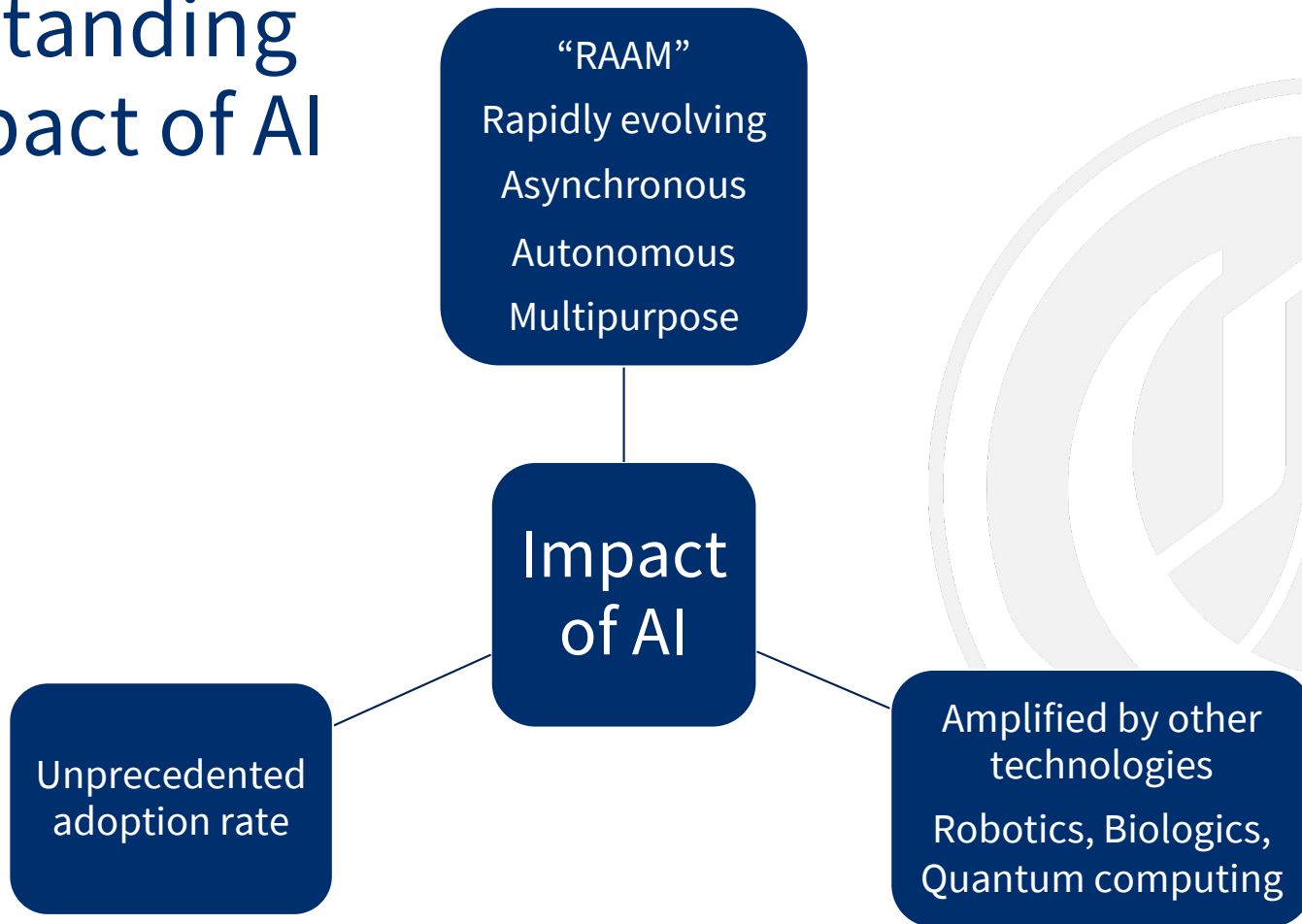


# Overview

- The Impact of AI
- AI in Vision 2030
- What are we doing and thinking about AI?
  - Professional Development
  - Research & Development
  - AI Survey
- The Future of Work
- Challenges and Concerns
- Next Steps & Discussion



# Understanding the Impact of AI



## Vision 2030: Strategic Direction 3

Engage with the impacts of generative AI on the future of teaching and learning. California community colleges should be leaders in this space. It is critical that policy and practice concerning AI is centered in both human oversight and a deep commitment to diversity, equity and inclusion.

**Analyze the impact of generative AI technology on teaching and learning** and take the necessary action in policy reform, systems development, and practices to advance success, access and support.

**Improve the student experience with the use of generative AI** applied to the “big data” systems (e.g. Student Information System, Learning Management System).

**Modernize system technology infrastructure** to support online education delivery and faculty.

# What are we doing and thinking about AI?

- Professional Development
  - Community of Practice on the Vision Resource Center (login & leave a comment)
    - Four-part webinar series concluded for 2023-24; videos and slide decks in the VRC
    - 2024-25 will have a six-part series
  - Board of Governor study sessions
  - AI Council actively developing documents and providing stakeholder input to the CO
- Partnerships & Alliances
  - Landscape analysis, vendor vetting, interviews
  - Identifying new AI tools that have promise
  - Preparing to launch and AI Fellows program
  - Statewide AI Survey
- Research and Development
  - Course equivalencies
  - Pathway optimization
  - The primacy of data
  - Preparing to the launch a new Digital Center for Innovation to coordinate the work

# Teaching and Learning Impacts

- Personalized learning
  - Key documents become wrapped in AI interfaces (talk to your syllabus, textbooks, assignments)
  - AI tutors on demand (e.g., Khanmigo)
- AI inclusion in course materials set by faculty
  - Polling shows most are shifting assignments and lessons incorporate or respond to ubiquity of AI
  - Ability to detect AI use by students limited
- Mobile and online continue to grow in importance
- Skills-based learning and learner employment records
- Accommodate the evolving role of AI in discipline-specific ways



# Principles and Values



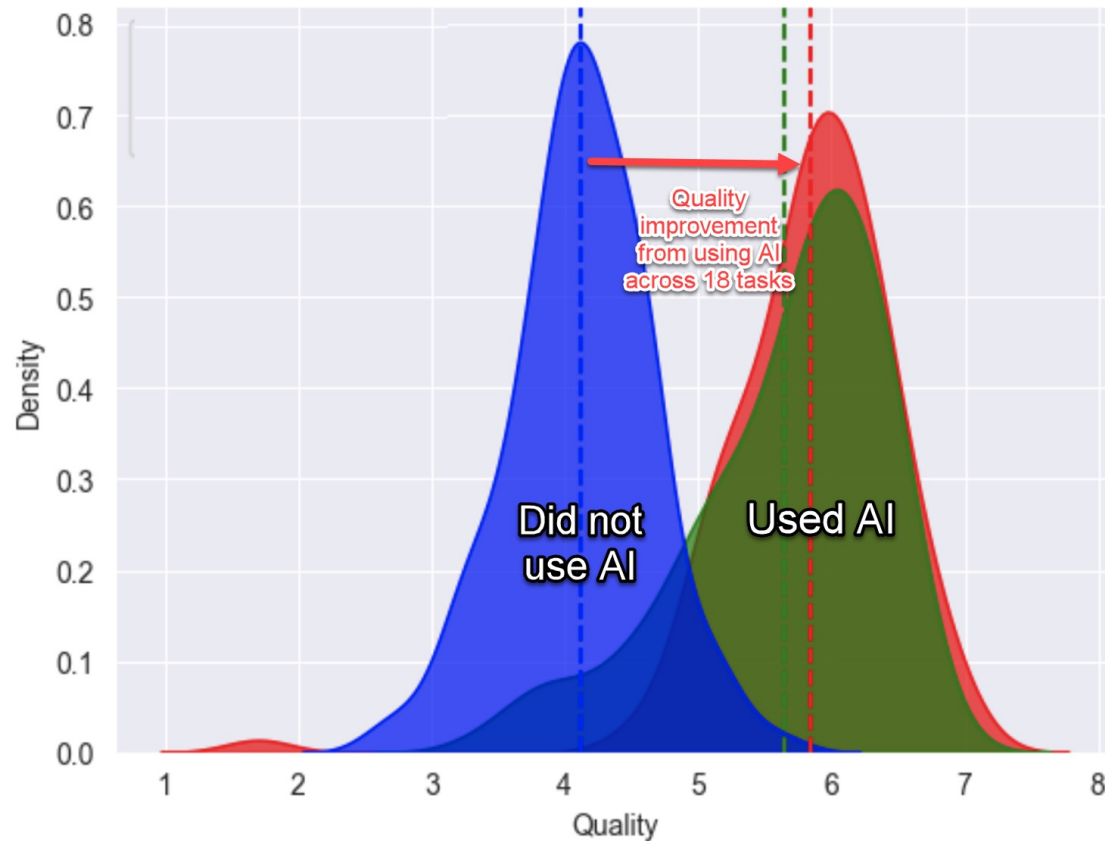


# H.U.M.A.N.S.

- **Human-Centered Approach** - Students, faculty, staff and administrators should be able to opt out, where appropriate, and have access to a person who can quickly consider and remedy problems they encounter. Ensure there are humans in the loop when capabilities are designed, tested and used to achieve successful outcomes.
- **Universal Support** - Students, faculty, staff and administrators should have equitable access to tools, training and solutions that minimize bias and improve outcomes.
- **Managed Privacy Controls** – Empower students, faculty, staff and administrators to have agency over how data about them is collected and used and set parameters that shield them from abusive data practices via built-in protections. Ensure that there is no use of student data beyond that which is needed to increase access and support.
- **Algorithmic Discrimination Protections** - Students, faculty, staff and administrators should not face discrimination by algorithms and systems should be designed and used in an equitable way. When tools are found to be discriminatory, thorough steps should be taken to avoid repeat incidents.
- **Notice and Explanation** – Students, faculty, staff and administrators should know that an automated system is being used and understand how and why it contributes to outcomes that impact them.
- **Safety and Security** – Students, faculty, staff and administrators should be protected from unsafe or ineffective systems.

# The Future of Work

# The AI Advantage



[Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality](#)

[Fabrizio Dell'Acqua, Edward McFowland, Ethan R. Mollick, Hila Lifshitz-Assaf, Katherine Kellogg, Saran Rajendran, Lisa Kraymer, François Canelon, Karim R. Lakhani](#)

[SSRN](#)

# Efficiency gains to be driven by AI

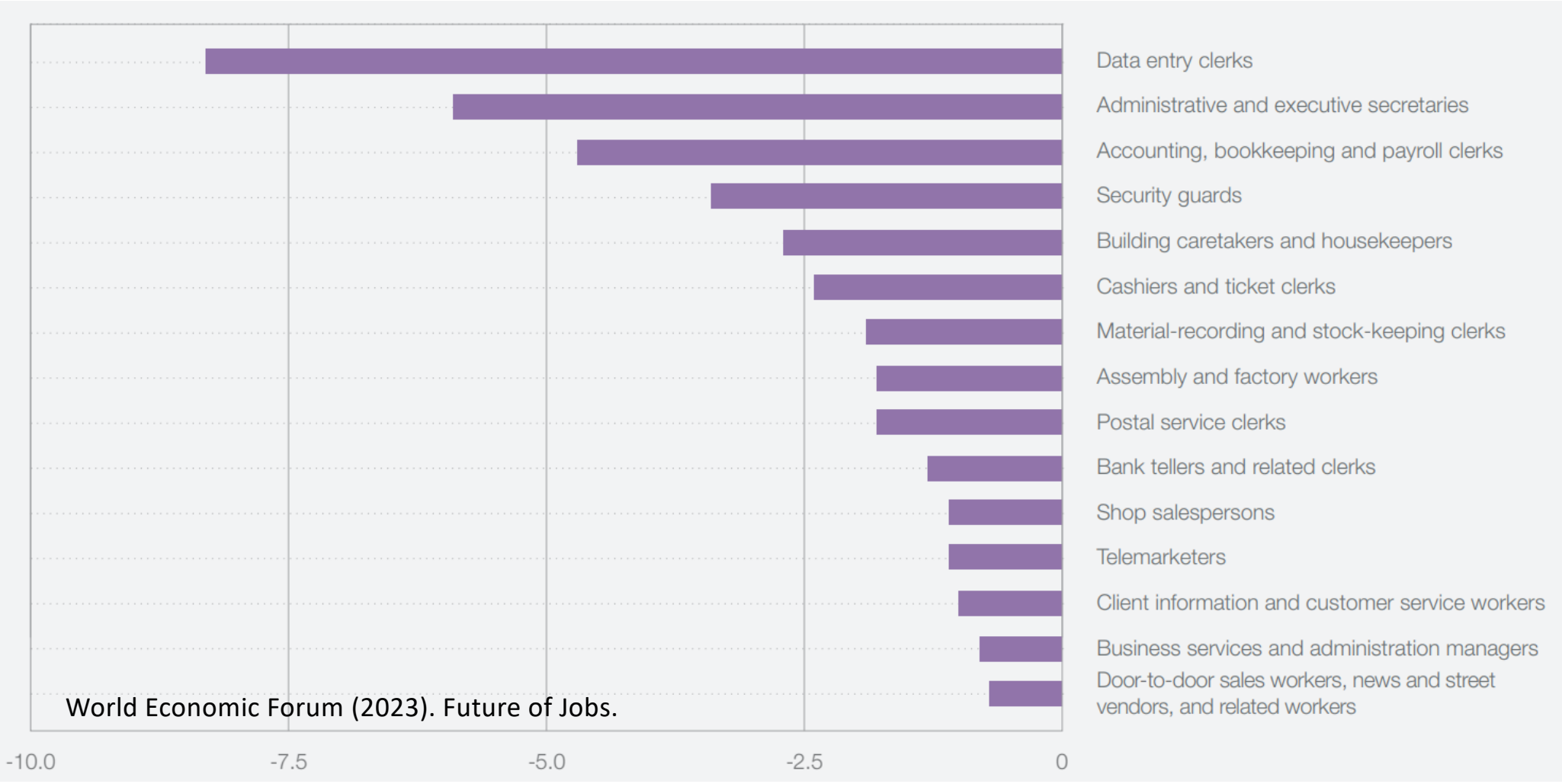
- AI Assistants
  - Personalized tutors
  - Personalized coaches
  - Mobile access to on-demand AI
    - To summarize documents
    - Take notes in meetings
    - Assist with brainstorming
    - Set reminders
    - Schedule meetings
    - Search for highly relevant and contextual data
    - Write code
    - Write emails
    - Write reports

# Ten Key Skills for an AI World

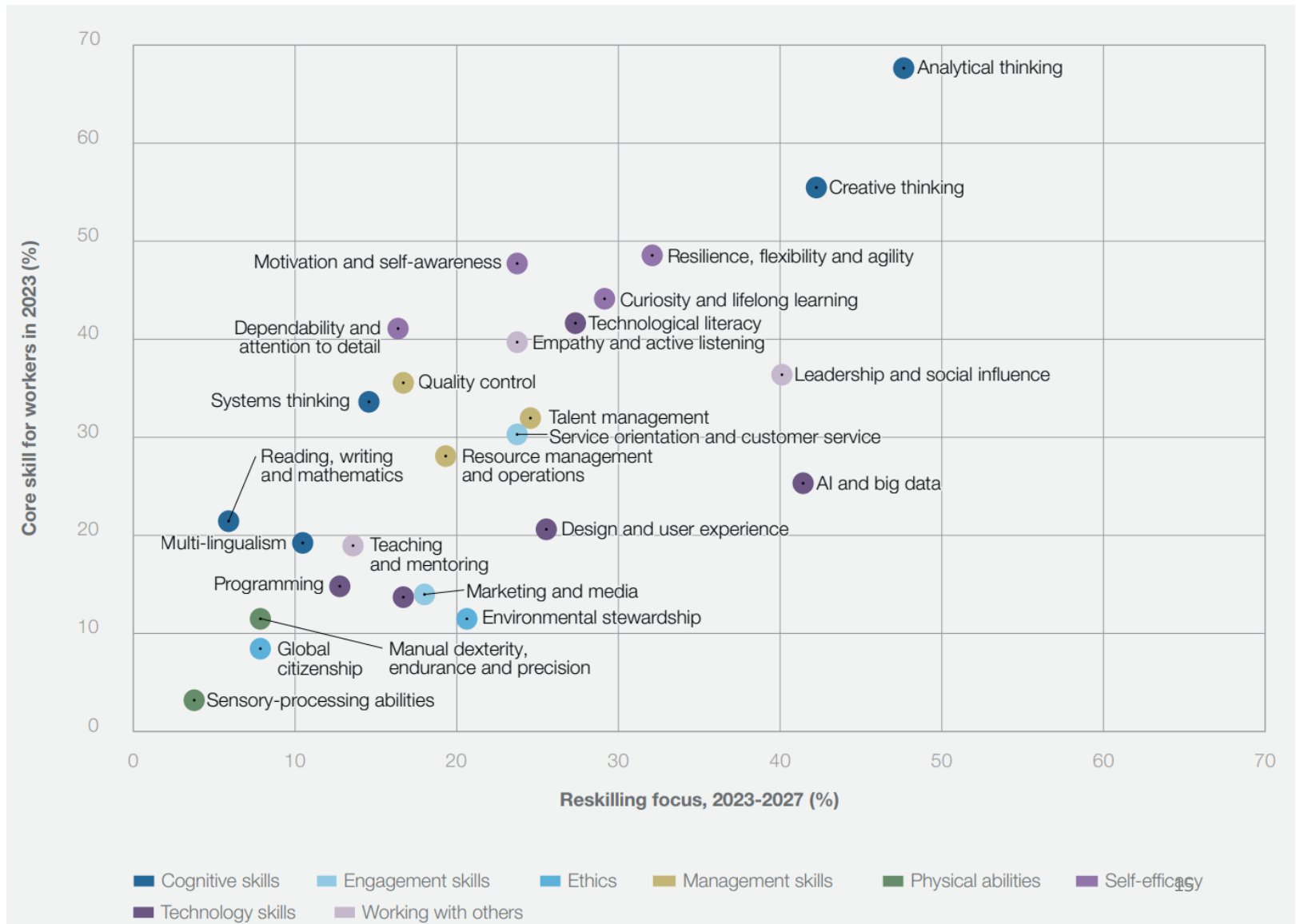
1. Analytical thinking
2. Creative thinking
3. AI and big data
4. Leadership and social influence
5. Resilience, flexibility, and agility
6. Curiosity and lifelong learning
7. Technological literacy
8. Design and user experience
9. Motivation and self-awareness
10. Empathy and active listening



# Shrinking job categories



# Skills on the rise



# Top 20 Fastest Growing Jobs Through 2027

AI and Machine Learning Specialists  
Software and Applications Developers  
Process Automation Specialists  
Database Architects  
Devops Engineers  
Business Development Professionals  
Commercial and Industrial Designers  
Data Engineers  
Digital Marketing and Strategy Specialists  
E-commerce Specialists

Blockchain Developers  
Digital Transformation Specialists  
Agricultural Equipment Operators  
Big Data Specialists  
Robotics Engineers  
Data Analysts and Scientists  
FinTech Engineers  
Information Security Analysts  
Business Intelligence Analysts  
Investment Fund Managers

# Challenges and Concerns

- Database of all AI-related legislation
  - [CITRISPolicyLab.org/AILegislation](http://CITRISPolicyLab.org/AILegislation)
- Crafting model AI policy and regulations
  - Emphasis on flexibility
- Bias and bad data in AI
- Effect on learning
- Effect on duties and workload

# Next Steps

- Integrated AI Guidance document from AI Council (July)
- July BOG meeting
  - Digital Center for Innovation
  - Setting direction for 2024-25
- AI Summit on September 10<sup>th</sup>
- New AI webinar series launching in fall
- Focus on developing and sharing practical guidance and professional development opportunities
- Creating a data platform capable of supporting system-level AI applications
- Promoting the inclusion of AI in the curriculum both as AI/ML/DA programs and integrated as needed and appropriate across all disciplines



# Discussion



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Thank you!

[www.cccco.edu](http://www.cccco.edu)