

# Rehumanizing Intelligence: Living Futures with AI

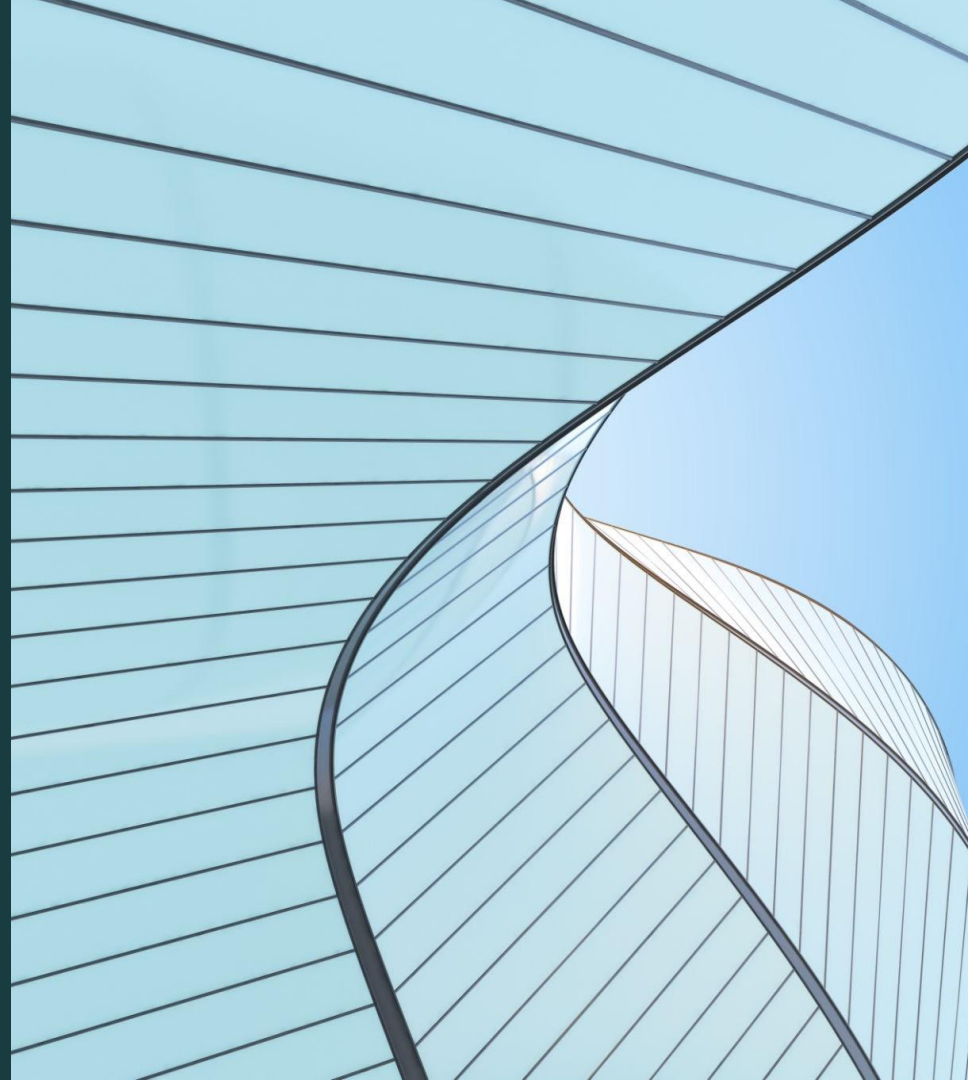
**Yu Jiang**, CSU Sacramento

**Kyuhan Koh**, CSU Stanislaus

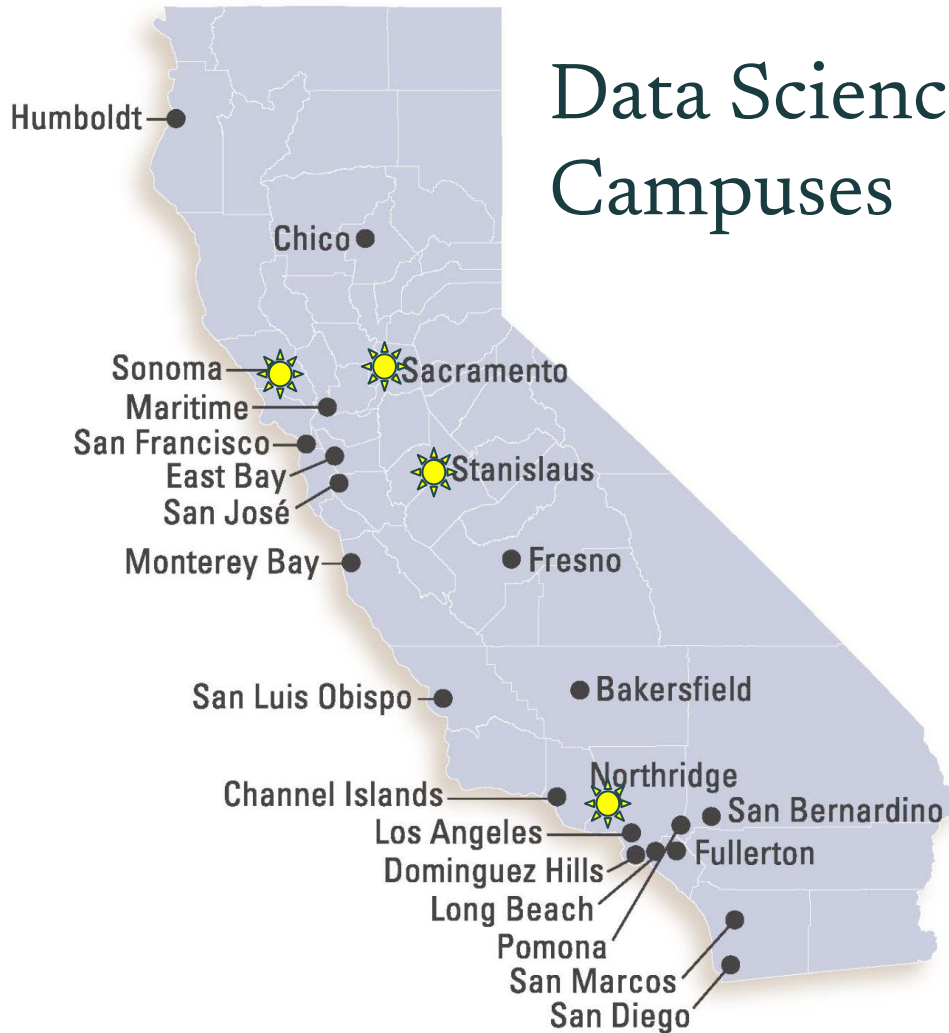
**Ramakrishna Dantu**, CSU Sacramento

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CSU Lesson Study Conference  
Friday March 6th



# Data Science Lesson Study Campuses



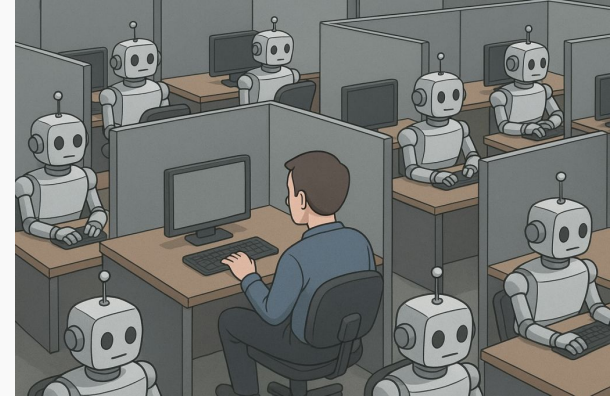
# WILL AI REPLACE HUMANS?



# Rehumanizing Dimension: Living Practice/Futures

**Narrative:** Humans will be replaced by AI

**Counternarrative:** We can coexist successfully



# Motivation

**Rehumanizing Intelligence: Living Futures with AI**

## MOTIVATION

# Why This Lesson Study?



Bridging the AI Literacy Gap in Data Science Education Across the CSU



AI is transforming every discipline — students need hands-on exposure



Educators must rethink how we prepare students for a rapidly evolving, AI-driven world



Yet AI literacy is rarely embedded into existing courses in a structured way

# A Collaborative, Equity-Centered Approach



## Multi-Campus Collaboration

Faculty from 3 CSU campuses co-designed a unified lesson plan, bringing diverse perspectives from data analytics, e-commerce, and Python programming.



## AI-Integrated Lesson Design

Students analyze real data first without AI, then with AI tools, building critical thinking about when AI adds value and when human judgment is essential.



## Equity-Focused Student Outcomes

Focal students from underrepresented communities were selected for deeper study, centering the experiences of Latinx/Hispanic students and those less engaged in class.



**Guiding Question:** Can a structured AI-integrated lesson shift students' understanding of AI's role, not as a replacement for human thinking, but as a tool that enhances it?

# The Lesson Study

**Rehumanizing Intelligence: Living Futures with AI**

# What trends do you see in the data?



[https://docs.google.com/spreadsheets/d/1\\_SaG3EF-Xmw2LQBshFuzJrq\\_toiPqR3RIN\\_jOnhs1Qs/](https://docs.google.com/spreadsheets/d/1_SaG3EF-Xmw2LQBshFuzJrq_toiPqR3RIN_jOnhs1Qs/)



# How We Chose the Data Set



## Smartphone Preference Survey

A cross-sectional dataset of smartphone preferences broken down by vendor and age group — familiar, accessible, and discussion-rich for all students.

| Vendor     | Age   | Count |
|------------|-------|-------|
| Apple      | 18-24 | 991   |
| Android    | 18-24 | 883   |
| Blackberry | 18-24 | 304   |
| Windows    | 18-24 | 102   |
| ...        | ...   | ...   |

*6 vendors × 4 age groups = 24 rows*

Source: Statistics for Business (Stine & Foster)



## Why This Dataset?

- ✓ Relatable to all students regardless of major
- ✓ Simple structure — easy to explore without coding
- ✓ Rich enough for AI-assisted analysis and visualization
- ✓ Supports cross-course deployment in diverse tools

## One Dataset, Three Courses



### Intro to Business Analytics — JMP

Yu Jiang, CSU Sacramento · ANOVA & trend interpretation



### E-Commerce Systems Design — Google Sheets

Kyu Han Koh, CSU Stanislaus · Market study & consumer insights



### Intro to Business Programming — Python + VS Code Copilot

Rama Dantu, CSU Sacramento · AI-assisted coding & data processing

- If someone is 19 years old, which phone would they most likely use?
  - If someone is 65 years old, which phone would they most likely use?
  - Which smartphone does each age group prefer?
  - What factors do you think influences their preferences?
  - If Blackberry phones were still available, what percentage of people would use them?
- 

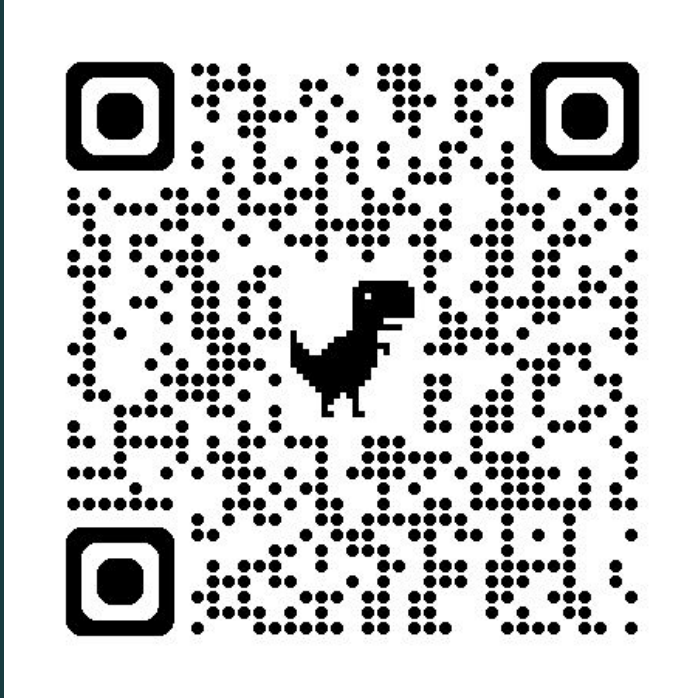


- ❖ After the students have gone through the questions the first time,
- ❖ let the students use AI and repeat all 5 of the above questions,
- ❖ plus one additional question that follows

# What new insights can you extract with the AI assistance.

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THANK YOU!

Post-Lesson Survey

# Feedback From Lesson Study

# Classroom Implementation

- Lesson deployed across different courses
  - **Data Analysis Class** - Students used ChatGPT (some used Claude/Gemini)
  - **AI-Assisted Coding Class** - Students used VS Code + GitHub Copilot
  - One class **never used AI before** within the class. This was the first time AI was formally integrated into an assignment



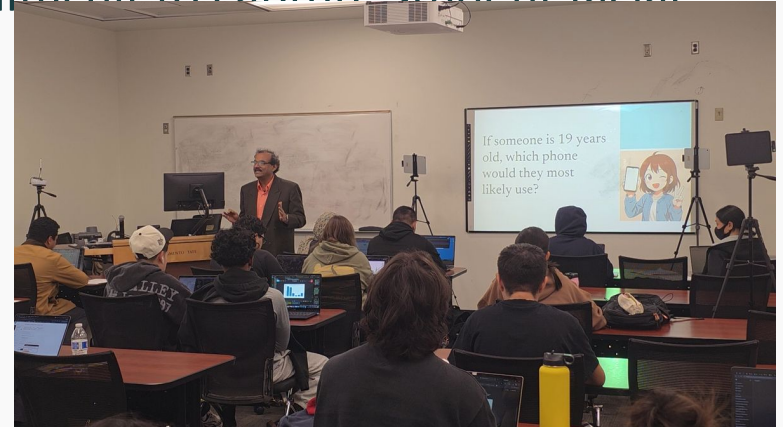
# Student Interaction with AI

- **High engagement** when copying prompts and testing AI responses
  - Dantu: High engagement from Latinx students
  - Koh: High engagement from both women and Latinx students
  - Jiang: High engagement from all underrepresented students.
- Some students experimented with **other tools (Claude, Gemini)**



# Overall observation

- Students engaged readily when given structured AI tasks
- Students observed how AI can “spark insights”
- For one class, lab setting made it difficult to capture student facial reactions (recording limitation)



# **Student Learning & Perceptions:**

## What Students Demonstrated

- Students reported learning more about how to use AI
- Students expressed dissatisfaction with instructors reluctance to teach them about AI
- For data-focused courses, the topic felt accessible and manageable



# Survey Results Analysis

## THE PROBLEM

# The AI Literacy Gap in Higher Education



### Student Feedback Reveals a Gap

Pre-test surveys showed notably negative feedback when students were asked if their professors have helped them learn to use AI. Many students feel we are not doing enough.

# 158

students responded to our pre-test across  
multiple CSU campuses



### Awareness & Access Gaps

Not all students were aware that the CSU provides ChatGPT Pro access for all faculty, students, and staff — a critical resource going underutilized despite its availability.



### Why It Matters

AI literacy is essential for students' future job prospects and career readiness across all disciplines.

# The Student Cohort



## How Students Define AI



*"Artificial Intelligence uses algorithms to analyze data and respond to prompts."*



*"A tool to help people in their everyday lives, speeding up tedious work tasks."*



*"Code with 'self-learning' properties... able to learn and adapt to any situation."*

## Participant Discipline

Distribution by academic major.



CS 4270 (E-Commerce)

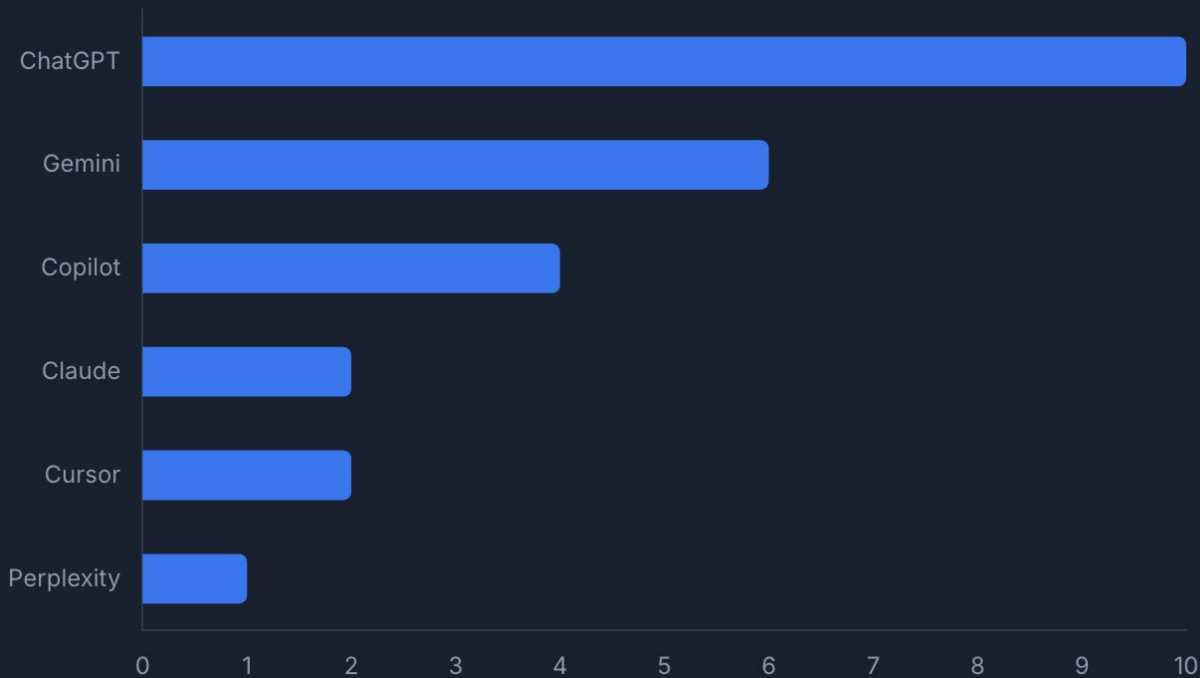
DS 101 (Intro to Business Analytics)

MGT 4900 (Strategic Mgmt)

# The AI Toolkit

## The AI Toolkit

Most frequently cited tools by usage count. ChatGPT remains the baseline, but Gemini is a strong contender.



# The AI Toolkit

## Top Use Cases

**01** Debugging Code Errors

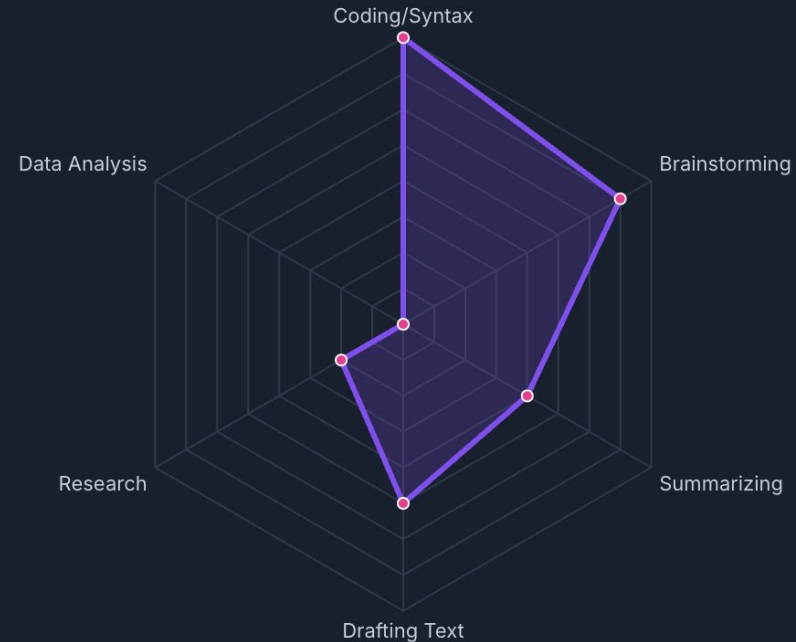
**02** Organizing Study Guides

**03** Brainstorming Sources

**04** Explaining Concepts

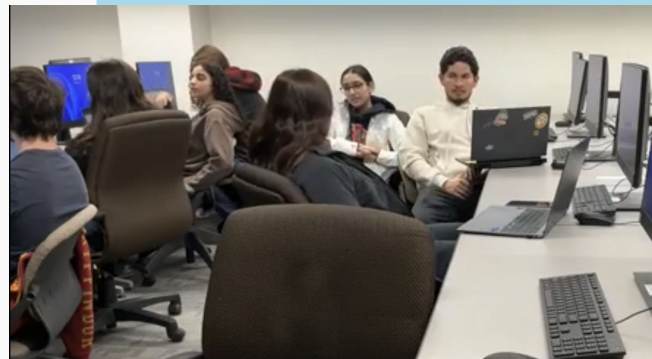
## The Productivity Matrix

Mapping the functional areas where AI delivers the most value to students.



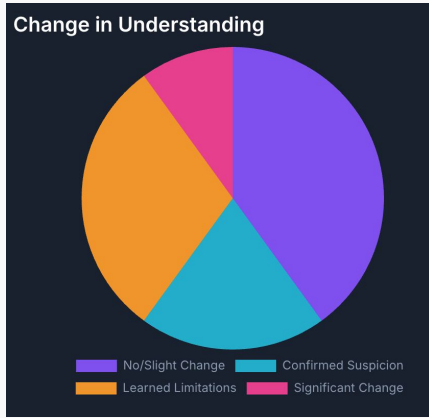
# Human AI Symbiosis

| H Human Cognition                                                                                                                 | AI Artificial Intelligence                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Data Collection</b><br>"Reading, listening, observation, and research." Humans use sensory experience and social verification. | <b>Data Processing</b><br>"Generative tool." Scrapes massive datasets to predict the next likely token/word. |
| <b>Analysis</b><br>"Critical thinking skills." Humans interpret meaning based on nuance, ethics, and "gut feeling."               | <b>Analysis</b><br>"Pattern recognition." It provides drafts and summaries but lacks understanding of truth. |
| <b>Validation</b><br>Comparing results to personal experience and group discussion.                                               | <b>Validation</b><br>Often "Hallucinates." Requires human oversight to ensure accuracy.                      |



One of the most revealing aspects of the survey was comparing how students define AI's operation versus how they describe their own human data collection. While AI is seen as an "algorithmic response to prompts," humans rely on sensory input, social verification, and intuition.

# Did the Lesson Change Minds?



*"I knew that non-specific prompts can result in incorrect answers. Humans use their critical thinking skills, not just regurgitating information."*

- DS 101 Student



After participating in specific AI testing modules, student perception shifted. While some felt their suspicions were merely confirmed, others realized the distinct limitations of "non-specific prompts" leading to incorrect answers.



# Thank You

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