



AI Labor Exposure & Ohio's Community Colleges

CURRICULUM RELEVANCE IN THE AGE OF AI

MIT CTL Work Analytics Lab

Ohio Data Summit 2026

Ohio Association of Community Colleges

Program-level exposure data sourced from [Opportunity Data](https://opportunitydata.org/ai-exposure.html) (opportunitydata.org/ai-exposure.html), 2026



1 / 15

THE TOOL

MIT's AI Labor Exposure Map: What It Measures & How



Task-Based Methodology

Breaks every occupation into individual tasks using BLS O*NET data. Each task is scored for AI acceleration or automation potential — not the job title as a whole.



Geographic + Industry Cross-Reference

Results are mapped to U.S. regions and industries — showing where AI disruption risk concentrates geographically and by sector, including Ohio's Midwest workforce.

THREE AI ABILITY MODELS IN THE TOOL

Adoption (Most Conservative)

What AI is doing today. Derived from the Anthropic AI Economic Index, where penetration scores represent loosely the share of a task currently capable of being automated or significantly assisted by Claude.

Current Capabilities

What AI could do today. Evidence-grounded estimate of present-day AI ability: multiple open-weight models judge each occupation-task pair using retrieved news and research abstracts, then the scores are calibrated to observed adoption.

Theoretical (Most Aggressive)

What AI might eventually do. Based on the GPTs are GPTs framework. Exposure is defined as a potential 50% reduction in task completion time while maintaining output quality.

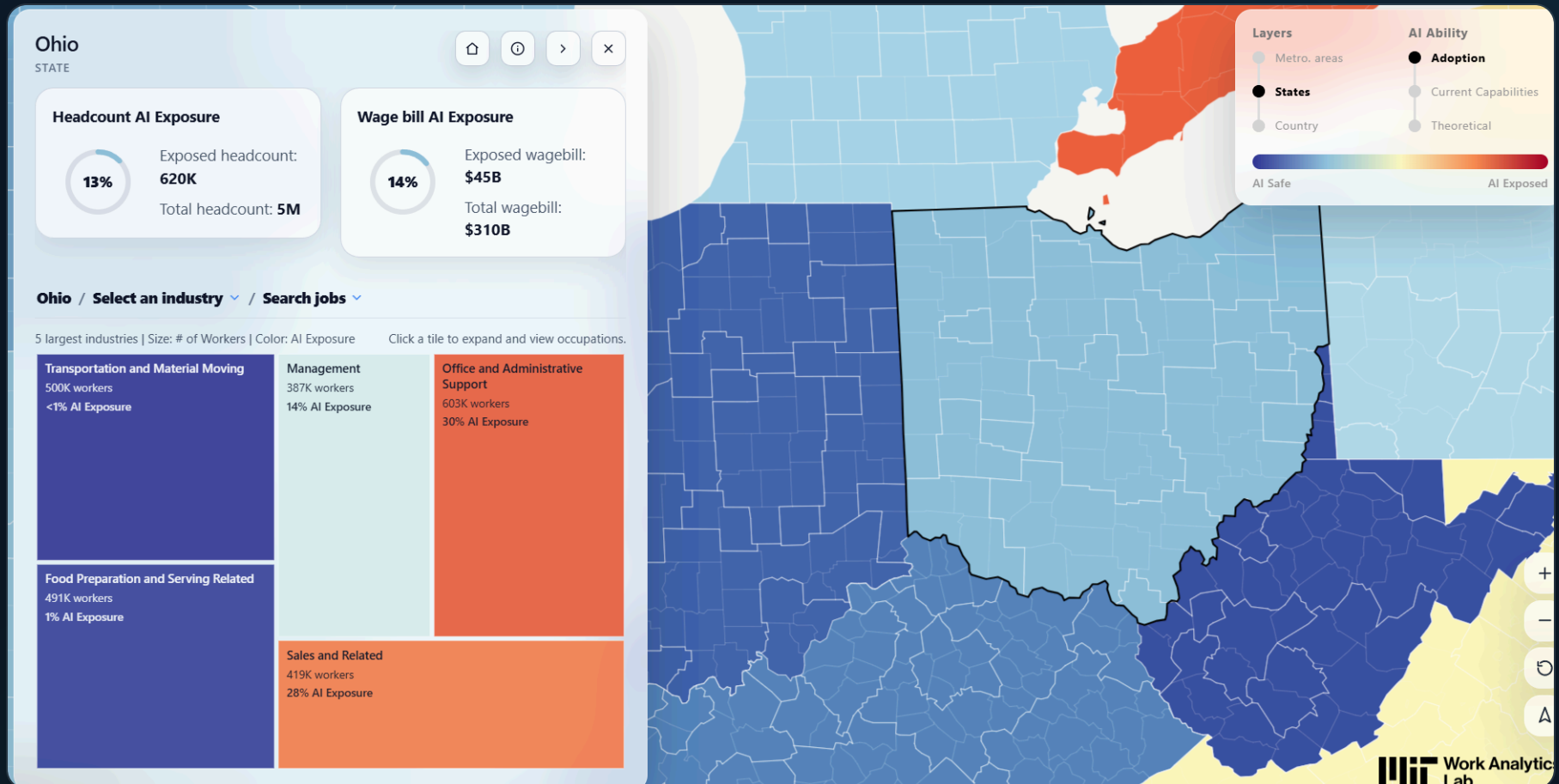
Built by MIT CTL PhD student **Pierre Bouquet** & visiting student **Luca Mouchel** · June 2026 · Interactive tool at workanalyticslab.com/us-ai-map



2 / 15

OHIO DATA · MIT WORK ANALYTICS LAB · ADOPTION MODEL (MOST CONSERVATIVE)

Ohio Statewide: Actual AI Adoption at Scale



Screenshot: [MIT Work Analytics Lab, US AI Labor Exposure Map](#) — Ohio, Adoption layer selected

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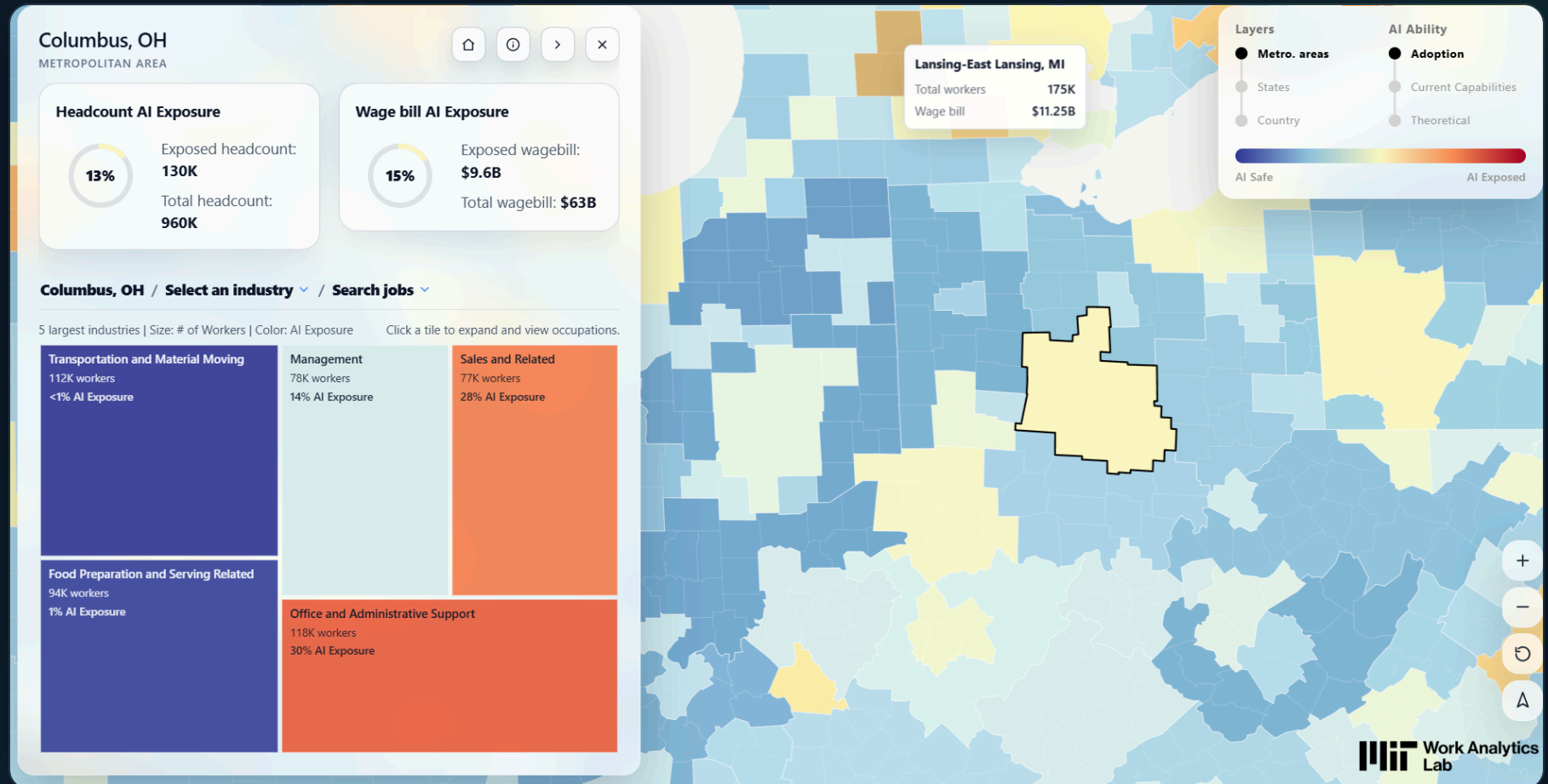
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3 / 15

OHIO DATA · MIT WORK ANALYTICS LAB · ADOPTION MODEL (MOST CONSERVATIVE)

Columbus, OH Metro: Industry-Level Exposure



Screenshot: [MIT Work Analytics Lab, US AI Labor Exposure Map](#) — Columbus, OH metro area, Adoption layer selected

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4 / 15

A SECOND LENS ON EXPOSURE · OPPORTUNITY DATA

How Opportunity Data Scores Academic Programs

1,786

Academic programs scored across the full federal CIP taxonomy

9

O*NET work characteristic variables across 3 dimensions

966

Occupations scored, linked to programs via NCES crosswalk

3

Dimensions: digital intensity, human contact, physical anchor

The index measures each program's net exposure to AI displacement by balancing digital work intensity against two protective factors. Routine device use — an iPad for transactions, a computer for documentation — does not equal AI readiness. A child care worker logging attendance on a tablet is not in the same risk category as a data analyst; the index captures this distinction.

Digital Intensity

How computer- and data-intensive is the core work? Interacting with computers, analyzing data, processing information.

Human Contact

Does the job require empathy, direct care, or constant interpersonal contact?
Assisting/caring for others, public contact.

Physical Anchor

Is the work grounded in physical presence, manual skill, or safety responsibility? Hands-on time, safety-for-others duties.

$$\text{DII v2} = (\text{Digital Intensity} - \text{Human Contact} - \text{Physical Anchor} + 2) / 3$$

Each dimension is computed from O*NET 23.1 survey data, normalized to a 0-1 scale. Program-level scores are employment-weighted averages across linked occupations, using the NCES CIP-SOC crosswalk and BLS OES May 2024 employment counts. A score of 0 means fully protected; 1 means fully exposed. Source: [Opportunity Data, 2026](#).

GOOD NEWS FIRST · SOURCE: OPPORTUNITY DATA, 2026

Ohio's Community Colleges: Already in the Safe Harbor

84%

of 2-year credentials scored sit in the **protected or moderate** AI exposure band (Opportunity Data, 2026)

16%

of 2-year credentials fall in the **exposed or highly exposed** tier — including IT, accounting, legal support, and general business programs

Top Protected Programs (2023 credentials awarded, national data):

Practical/Vocational Nursing

49,414 credentials · Score 0.37

Registered Nursing (RN)

44,294 credentials · Score 0.38

Precision Metal Working

36,580 credentials · Score 0.46

Vehicle Maintenance & Repair

33,244 credentials · Score 0.47

Electrical & Power Transmission

15,670 credentials · Score 0.37

Allied Health / Diagnostic

31,603 credentials · Score 0.48



6 / 15

PROGRAMS REQUIRING CURRICULUM ATTENTION · SOURCE: OPPORTUNITY DATA, 2026

The **Exposed Tier** at Community Colleges: Programs Where Curriculum Must Adapt

IT & Computer Science



0.68

High

IT Administration



0.68

High

Accounting & Related Services



0.66

High

Legal Support / Paralegal



0.68

High

General Business / Admin



~0.58

Moderate

⚡ These programs are not obsolete — they need **immediate curriculum review** to integrate AI tool competencies into their curricula.



7 / 15

STUDENTS ARE ALREADY REACTING

Enrollment Is Falling in the Most Exposed Programs

-19.7%

YoY enrollment change, Computer and Information Sciences, Ohio 2-year colleges, 2026

-12.3%

YoY enrollment change, Visual and Performing Arts (graphic design), Ohio 2-year colleges, 2026

Figure 5.4 Undergraduate 2-Year Enrollment in Top 10 Major Field Families by State: Ohio

	2021 Enrollment	% Change from Previous Year	2022 Enrollment	% Change from Previous Year	2023 Enrollment	% Change from Previous Year	2024 Enrollment	% Change from Previous Year	2025 Enrollment	% Change from Previous Year	2026 Enrollment	% Change from Previous Year
Liberal Arts and Sciences,...	43,254		42,200	-2.4%	43,015	1.9%	39,669	-7.8%	40,382	1.8%	41,416	2.6%
Health Professions and R..	29,309		26,412	-9.9%	25,370	-3.9%	26,768	5.5%	30,561	14.2%	33,267	8.9%
Business, Management, ..	13,057		12,827	-1.8%	14,401	12.3%	12,800	-11.1%	13,363	4.4%	12,705	-4.9%
Engineering Technologies..	7,872		8,258	4.9%	7,815	-5.4%	7,842	0.3%	8,273	5.5%	8,435	2.0%
Construction Trades	4,781		5,566	16.4%	6,538	17.5%	6,937	6.1%	6,895	-0.6%	6,974	1.1%
Computer and Information..	5,034		4,986	-1.0%	5,337	7.0%	5,504	3.1%	5,409	-1.7%	4,341	-19.7%
Security and Protective S..	2,945		2,663	-9.6%	2,388	-10.3%	2,340	-2.0%	2,348	0.3%	2,273	-3.2%
Visual and Performing Arts	1,946		1,969	1.2%	2,041	3.7%	2,147	5.2%	2,209	2.9%	1,939	-12.3%
Public Administration and ..	1,598		1,526	-4.5%	1,251	-18.0%	1,768	41.3%	1,658	-6.2%	1,765	6.5%
Mechanic and Repair Tec..	891		954	7.1%	1,092	14.4%	1,196	9.5%	1,255	5.0%	1,448	15.4%

Select Institution Type
Fig. 5.4

- ☐ Undergraduate 4-Year
☐ Undergraduate PAB
☒ Undergraduate 2-Year

Select State
Fig. 5.4

Ohio

Source: National Student Clearinghouse, Spring 2026 Enrollment Trends Report — Ohio Undergraduate 2-Year Enrollment by Top 10 Major Field Families

Students in Ohio's highest-exposure programs are already walking away — some likely out of fear, not fact. Curriculum change is not optional; it is the difference between losing these students to uncertainty and retaining them by proving these programs teach AI fluency, not obsolescence.

OHIO-SPECIFIC CONTEXT

Why Ohio's Workforce Mix Matters for This Map

Manufacturing & Advanced Mfg.

Ohio ranks among top 3 states in manufacturing employment. Precision metalworking, welding, and CNC programs have *low* overall AI substitution risk — but AI tools for inspection, scheduling, and quality control are rapidly integrating.

Logistics & Supply Chain

Ohio's central location makes it a logistics hub. AI is transforming route optimization, inventory management, and demand forecasting — while physical driving and loading roles remain protected. Curriculum must reflect both sides.

Healthcare (Largest Employer Sector)

Nursing and allied health are Ohio's single largest community college credential output. Physical, patient-facing care has a 0.37–0.48 exposure score — protected. However, documentation, billing, and scheduling tasks within these roles are shifting fast.

Business & Accounting

Ohio community colleges graduate ~16K/year in accounting and business programs. With exposure scores of 0.66–0.68, these programs face the most urgent curriculum update need — AI is already reshaping bookkeeping, payroll, and tax prep tasks.



PRACTICAL EXAMPLE 1

Exposure Score: 0.37–0.38 (Protected)

Nursing Programs (LPN/RN):

Low Exposure, High Augmentation Opportunity

TASKS AI CAN NOW PERFORM OR ASSIST

SBAR handoff note drafting — **FULLY AUTOMATED**EHR ambient voice documentation (Epic Art) — **FULLY AUTOMATED**Discharge education summary drafting — **AUGMENTED**Early deterioration alerts from monitoring data — **FULLY AUTOMATED**Medication reconciliation & scheduling support — **AUGMENTED**

WHAT STAYS HUMAN (AI CANNOT REPLACE)



Therapeutic patient relationships and emotional support



Clinical judgment and critical decision-making



Verifying and signing AI-generated documentation



Physical assessment and hands-on procedures



Ethical decision-making at end of life



Curriculum Action: Add AI documentation literacy, HIPAA-safe AI tool protocols, and clinical AI validation skills. Pilot programs at Mercy Health (Epic Art) reduced nurse note time by 85%.



PRACTICAL EXAMPLE 2

Exposure Score: 0.46 (Protected)

Advanced Manufacturing, Welding & CNC:

Ohio's Core — Now AI-Augmented

AI IS ALREADY ENTERING THE SHOP FLOOR

 CNC toolpath generation from CAD/blueprint input — **FULLY**

AUTOMATED

 Computer vision defect detection on finished parts — **FULLY**

AUTOMATED

 Predictive maintenance scheduling & alerts — **FULLY**

AUTOMATED

 Welding procedure spec drafting from blueprints —

AUGMENTED

 Inventory & materials scheduling optimization — **FULLY**

AUTOMATED

WHAT SKILLED HUMANS STILL CONTROL

 Physical setup, fixturing, and hands-on machine operation

 Interpreting edge cases & non-standard materials

 Real weld execution — judgment under heat and movement

 On-the-fly problem solving for unexpected conditions

 Supervising and validating AI-generated programs

 **Curriculum Action:** Integrate AI-assisted CNC software (e.g., Mastercam AI tools), computer vision inspection labs, and predictive maintenance simulation. Workers who can validate AI outputs command premium wages.



10 / 15



PRACTICAL EXAMPLE 3

Exposure Score: Mixed (0.40–0.55)

Logistics & Supply Chain Management: Ohio's Strategic Advantage With AI

TASKS SHIFTING TO AI FASTEST

 Demand forecasting and inventory replenishment — **FULLY**

AUTOMATED

 Dynamic route optimization and last-mile planning — **FULLY**

AUTOMATED

 Purchase order processing & vendor communication — **FULLY**

AUTOMATED

 Warehouse slotting and pick-path optimization — **AUGMENTED**

 Disruption alerts and exception management — **AUGMENTED**

THE HUMAN EDGE (STILL REQUIRED)

 Supplier and carrier relationship management

 Multi-constraint crisis resolution (strikes, weather)

 Physical loading, hauling, and equipment operation

 Regulatory compliance and customs interpretation

 Strategic sourcing decisions with ethical tradeoffs



Curriculum Action: Integrate hands-on work with AI tools like SAP TM, Oracle SCM, or Blue Yonder. Teach students to interpret AI forecasts, override poor recommendations, and manage human-AI handoffs in warehouse environments.



PRACTICAL EXAMPLE 4

Exposure Score: 0.66–0.68 (High — Urgent)

Accounting, Business & Office Programs: Highest Urgency for Curriculum Redesign

WHAT AI IS ALREADY DOING (TODAY)

Transaction coding in QuickBooks & Xero — **FULLY AUTOMATED**Standard financial reports and variance summaries — **FULLY AUTOMATED**First drafts of audit workpapers & tax filings — **AUGMENTED**Payroll processing and compliance monitoring — **FULLY AUTOMATED**AP/AR fraud detection and anomaly flagging — **FULLY AUTOMATED**

THE NEW SKILLS THAT COMMAND VALUE



Prompt engineering for accounting AI systems



Reviewing & validating AI-generated outputs



AI ethics, audit trails & bias recognition



Client advisory: explaining AI limitations to clients



Data storytelling and strategic financial insight



Curriculum Action (Urgent): PwC committed \$1B+ to AI workforce training emphasizing prompt engineering. Big 4 expect it as a core skill. Ohio's accounting programs must add AI prompt literacy, AI output validation modules, and ethics frameworks — or risk credential devaluation.



12 / 15

THE ACTION FRAMEWORK

A 3-Step Curriculum Response Framework

1

AUDIT — Map Your Programs to the MIT Tool

Visit workanalyticslab.com/us-ai-map. Search your specific program's key occupations. Document the exposure score and which specific tasks are rated as AI-acceleratable. Compare to your current course competencies. This is your baseline gap analysis.

2

CONVENE — Bring the Data to Curriculum Review

Present exposure scores in your program review process. Ask: "Which of these AI-performable tasks are you already seeing in your workplace?" and "What new AI-augmentation skills do you want our graduates to have?" Use employer confirmation to drive curriculum changes.

3

INTEGRATE — Embed AI Augmentation Into Existing Courses

Do not create a standalone "AI course." Instead, embed AI tool competencies directly into existing program courses. Nursing students practice AI charting. Accounting students use QuickBooks AI agents. Manufacturing students program CNC with AI assistance. This is how augmentation becomes curriculum.



13 / 15

SUMMIT ZOOM BREAKOUT — ~25 MINUTES · [WORKANALYTICSLAB.COM/US-AI-MAP](https://workanalyticslab.com/us-ai-map)

Breakout Activity: Explore the MIT Map Live

Step 1 — Form Your Room

Join the Zoom breakout room assigned to your college's geographic region of Ohio. You'll explore the MIT tool together as a regional group.

Step 2 — Select Your Subregion

On the map, zoom into your region of Ohio. As a group, agree on a county or metro subregion to explore together.

Step 3 — Choose an Industry

Browse industries for your subregion. Select a sector with higher AI exposure that aligns to a program your colleges offer.

Step 4 — Pick an Occupation & Read the Tasks

Choose an occupation within the industry that aligns to a community college credential. Open its task list — review each task's **time share** and **AI exposure %**. What surprises your group?

Step 5 — Sort the Tasks

FULLY AUTOMATED — AI can do this task independently today.

AUGMENTED — AI assists, but a human must direct, verify, or apply judgment.

Step 6 — Report Out

Share: **(1)** Occupation chosen. **(2)** Most surprising fully-automated task. **(3)** One augmentation skill that should be in the curriculum — if it isn't already.

 **Facilitator tip:** Encourage groups to resist jumping to "we already do this" — the goal is honest gap identification, not program defense. Reactions are data.



14 / 15



The Harbor Is Already Yours. Now Make It Stronger.

Ohio's community colleges graduate the workforce that requires a human touch — nursing, manufacturing, trades, allied health. The MIT map confirms this is exactly where AI cannot substitute.

Our opportunity is to make these graduates even more valuable by training them to *use* AI effectively.

MIT TOOL

workanalyticslab.com/us-ai-map

EXPOSURE INDEX

opportunitydata.org/ai-exposure.html

O*NET TASK DATA

onetonline.org

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15 / 15