Work Structure Best Predicted the Unemployment Rise of Five AI Exposure Measures

A test of five AI exposure measures against the CPS through September 2026 and OEWS through May 2025: the Opportunity Data AI Exposure Index, Felten, Raj and Seamans LM-AIOE, Eloundou et al. GPT-4 and human ratings, and the BLS AI Exposure Categories.

+0.10 pts
Unemployment change per year per standard deviation of the Opportunity Data AI Exposure Index, within occupational group

0 of 4
Capability and usage measures that predict the post-2022 unemployment rise once remote-work potential is held constant

+0.2 / +0.9
Unemployment change in points, divergent set / jointly exposed occupations

p=0.005
Chance of a result this strong for the Opportunity Data AI Exposure Index if its scores were shuffled within occupational groups

Key takeaways

- → **The Opportunity Data AI Exposure Index predicts the post-2022 unemployment rise most strongly.** Within occupational groups, unemployment rose +0.10 points a year faster per standard deviation (p=0.019; +4.3% per year as a proportional change), with no relationship in 2016-19. Felten et al. also predicts the proportional rise (+3.4%, p=0.032); the Eloundou et al. and BLS measures do not reach significance.
- → **Remote work does not explain it.** Holding remote-work potential constant (Dingel and Neiman 2020), the Opportunity Data AI Exposure Index still predicts the rise (+0.11 points, p=0.021) and none of the four other measures does, on either scale. A shuffle test puts the chance of a result this strong at p=0.005.
- → **Where BLS and the Opportunity Data AI Exposure Index disagree, outcomes side with work structure.** In occupations BLS rates highly exposed and the Opportunity Data AI Exposure Index rates two tiers lower (31.2 million workers in teaching, nursing, counseling, sales and office support), unemployment rose 0.2 points, against 0.9 points where both measures agree on high exposure.
- → **No measure predicts employment or wages.** Every measure detects the cross-sector shift away from young workers equally (1.63 to 1.79 points a year slower growth), none separates occupations within a sector, and none predicts employment once sector composition is controlled for. Exposed occupations had faster wage growth on every measure.
- → **The forward test is fixed in advance.** Scores are frozen at the September 2026 release; six hypotheses will be scored on the CPS through September 2027 and 2028 and OEWS May 2026 and 2027, and published whatever they show.

Sources: Census Bureau CPS basic monthly files, January 2015 to September 2026; BLS OEWS national estimates, May 2016 to May 2025; Felten, Raj and Seamans (2023); Eloundou, Manning, Mishkin and Rock (2023); BLS AI Exposure Categories (August 27, 2026); Dingel and Neiman (2020). Full results: opportunitydata.org/ai-exposure-outcome-validation.html