

AI & Jevons Paradox

The growing demand for engineering.

New research from Karat shows that AI is improving software engineering output without reducing headcount. Organizations are taking on more work, shipping more, and investing in talent because AI actually doesn't mean less engineering.

1. Organizations are using AI to do more, but they're not shrinking.

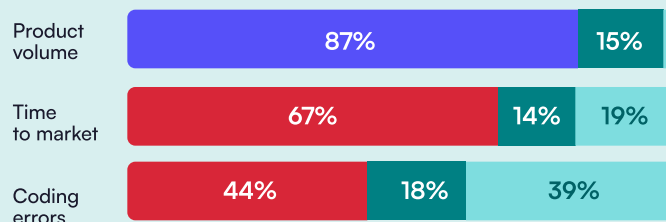
While the volume of products and features shipped has grown, shipping cycles are getting longer and the quality of code being produced is questionable.

How AI is impacting engineering output and headcount



Change over the past year for most organizations

■ Increase
 ■ Decrease
 ■ No change



INSIGHT:

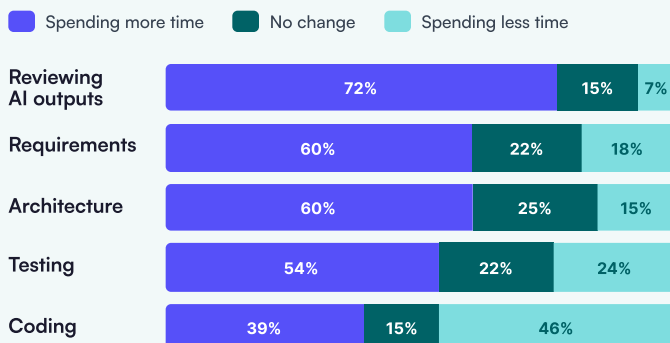
The AI Productivity Boom May Be Creating More Demand For Engineering, Not Less.

This dynamic is consistent with Jevons paradox: as the cost of a good or service decreases, demand increases. As AI reduces the effort required to generate code, organizations can pursue more software projects and ship more features, consuming productivity gains through greater output rather than simply banking them as lower headcount.

2. AI is changing the engineering job.

Coding is taking a smaller share, while the work around it (review, architecture, requirements, testing, and governance) is growing.

Engineering activity



INSIGHT:

AI Is Making Code Cheaper. It Isn't Making Software Engineering Disappear.

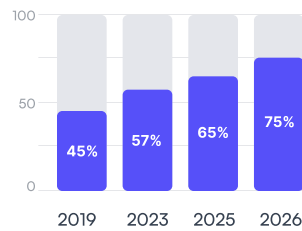
As execution becomes easier, the constraint moves. Organizations need engineers who can determine what to build, architect systems, evaluate AI output, manage risk, and turn increasingly abundant code into reliable products. That is changing the skills and the engineers organizations value most.

3. AI is creating engineering leverage and making top performers more valuable.

As a result, organizations are investing in more senior talent and more upskilling.

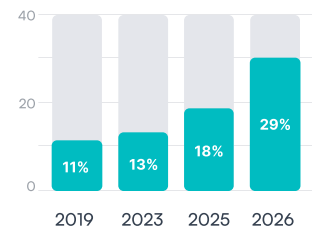
The value of a strong engineer is rising (Global)

Share who say a strong engineer is worth at least 3x total compensation



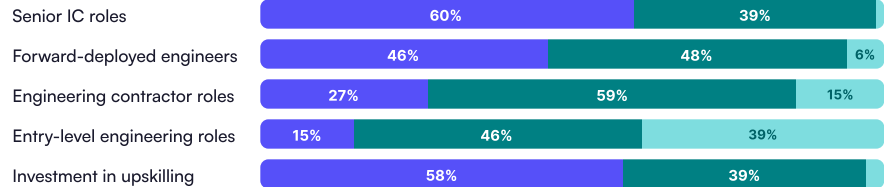
The upper end of the curve is stretching (US)

Share worth 5x or more total compensation



Expected change in engineering roles over next 3 years

■ Increase
 ■ No change
 ■ Decrease



INSIGHT:

The Traditional Engineering Pyramid May Be Becoming A Diamond, But Compensation Models Haven't Caught Up.

Organizations are concentrating more talent among senior and specialized engineers while reducing investment at the entry level. That creates an immediate talent challenge where the next generation of senior engineers will come from if the entry-level pipeline contracts.

4. CIOs are starting to factor in AI token costs, but ROI isn't aligned with revenue

How AI is impacting engineering output and headcount

75%

consider each engineer's total cost, including AI usage

74%

optimize AI spend at the individual engineer level

42%

report product or feature revenue as a CIO metric

INSIGHT:

Growing Organizations, More Senior Talent, And AI Investments Are Increasing Costs.

But less than half of CIOs are reporting product or feature revenue as part of their metrics.

THE BOTTOM LINE:

The Next Phase Of AI Transformation Isn't About Maximizing AI Adoption. It's About Translating Human + AI Engineering Investments Into Business Value.

- Two out of three engineering leaders are still relying on traditional compensation ranges, but 80% expect the wage gap between top performers and lower performers to grow.
- Investments in AI and elevating workforce quality need to be justified with business ROI, but less than half of engineering leaders are reporting on revenue-based metrics.
- Organizations that can identify differentiated talent, deploy it effectively, and measure the value it creates with AI will have the clearest path from AI productivity to business performance.