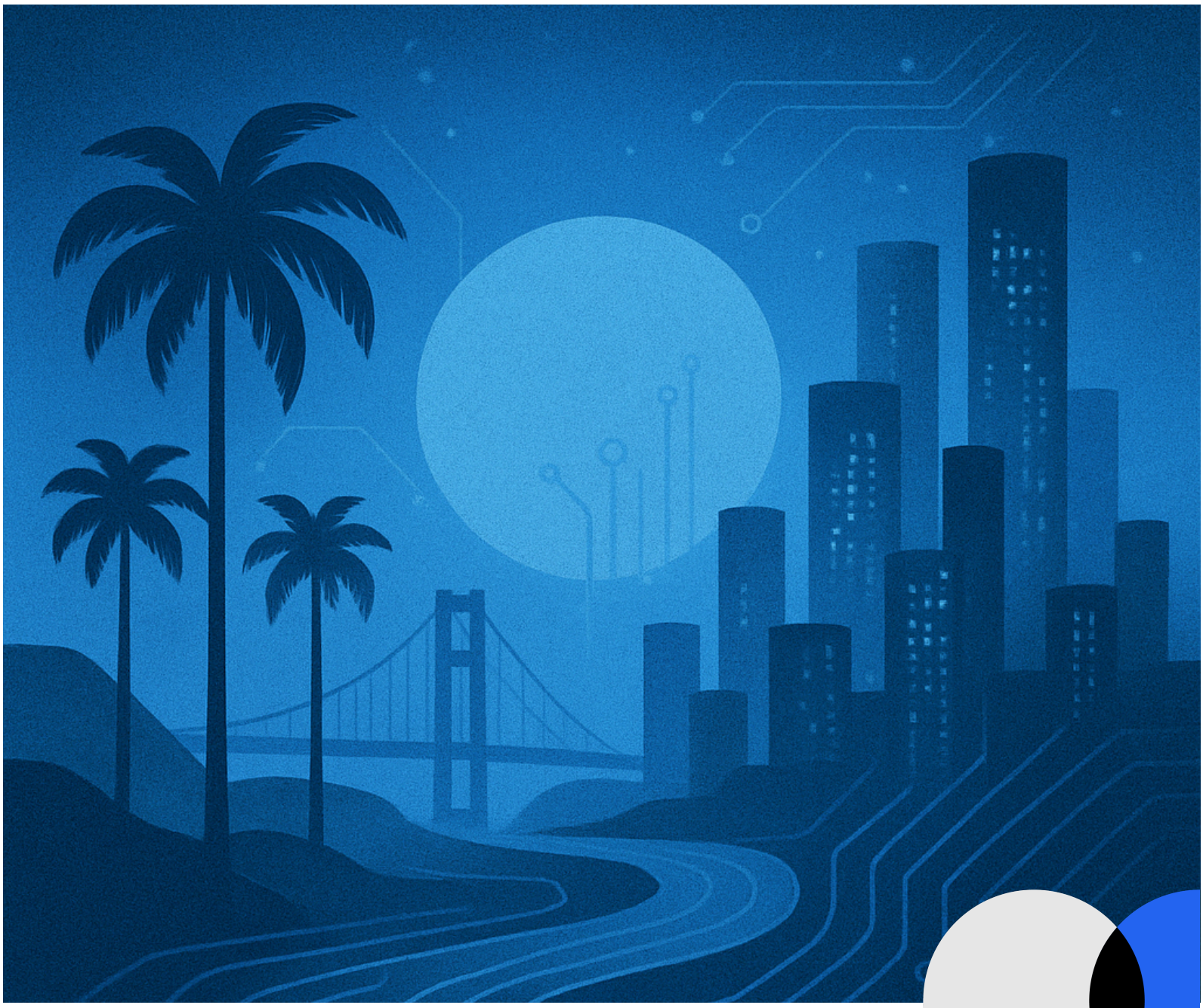

Unlocking Economic Opportunity in the Golden State:

A First Look at AI-Powered Productivity & Entrepreneurship in California

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OpenAI

Introduction

From the construction of the Transcontinental Railroad to the birth of Silicon Valley, technological breakthroughs have reshaped what Californians can achieve. AI is the next inflection point. When deployed broadly, it can raise living standards, stimulate new firms, and further increase productivity. California has already seen some of the highest productivity growth in the nation, including a 3.9 -percent jump in private-sector labor productivity in 2024, which was the biggest contributor to national gains. Our task now is to use AI to help sustain that momentum and steer the gains toward inclusive growth – ensuring that workers, small businesses, and communities from Eureka to El Centro ride the "up elevator" of AI.

California of course is also the home of the AI boom. The state commands an outsized share of the AI innovation stack:

- **California leads in AI jobs:** In 2024, California had more than 103,000 or over 15 percent of all AI-related job postings across the US, making it the top state for AI job postings.
- **California leads in AI companies:** More than 2,600 AI companies are headquartered here including 33 of the leading 50 privately held AI firms. Additionally, 68 percent of all US venture dollars in the first half of 2025 flowed to California startups, including many AI companies, with investments totaling about $94.5 billion.
- **California leads in AI talent:** California is a leading producer of AI talent. It ranks among the top five states for AI use by college-aged users. Additionally, California universities including Stanford, Cal Tech, University of California–Berkeley and others have produced many of the top AI researchers around the world. Indeed, Berkeley was one of the top five universities for computer science graduates in the US in 2023.

This note provides an early look at how AI is influencing productivity across key California sectors and catalyzing a new wave of entrepreneurship.

The exact scale of AI's potential impact on productivity remains unknown and economists continue to produce varied estimates. But much of the productivity impact will rely on how rapidly AI spreads across the state, how quickly the models advance, how AI tools are adopted by people and firms, the policies that shape its deployment, and the policies put in place at the state, local and federal levels. Below, we lay out some early insights into AI's economic effects based on data on how Californians are currently using ChatGPT.

3B

messages per day globally

~60M

messages per day in California

19%

California-based messages about written communication

19%

California-based messages about learning & upskilling

How Californians Are Using ChatGPT

Millions of Californians already use ChatGPT in their daily lives and work. California leads the US in total weekly active users of ChatGPT at over nine million. The state is one of the top five by overall share of population using ChatGPT.[1] An analysis of the uses for these messages shows varying use cases including:

1. Learning & Upskilling (19%): Students, workers, and small business owners across the state are using ChatGPT for advice on how to do different tasks and as a tailored tutor to help them learn new-concepts quickly.

2. Writing & Communication (19%): Workers are able to draft emails, reports, and compliance documents more rapidly, freeing up time for them to focus on brainstorming and reviewing.

3. Programming, Data Science & Math (7 %): Both expert engineers and "vibe coders" lean on GPT models to generate boilerplate code, refactor legacy code, and debug algorithms.

Smaller but economically relevant segments include Design & Creative Ideation (7 %); Health, Fitness, and Self-Care (7 %); and Translation (4 %).

Young Californians are particularly frequent users of ChatGPT, which means there may be long-term economic benefits for the state as this generation continues to use AI tools going forward. One quarter (24%) of California users are between the ages of 18 and 24, and one third (34%) are between ages 25 and 34. California schools are also early adopters of AI. Through our partnership with the California State University, its over 500,000 students and faculty across its 23 campuses have received licenses to use ChatGPT.

[1] *Except where otherwise noted or linked, data cited in this analysis are OpenAI's own internal data.*

Sector-Level Productivity Gains

Environment: As fire seasons grow longer and more intense, agencies are adopting AI-powered detection and prediction systems to speed response times. Researchers at the University of Southern California trained a conditional Wasserstein GAN to forecast California wildfire spread using weather, fuel, and terrain data. Private firms like PriviNet are developing low-power, solar-enabled sensor networks that combine infrared, heat, and IoT monitoring to identify risks in remote areas, while IBM and NASA's geospatial foundation model improves satellite-based perimeter mapping. Together, these tools aim to give crews more lead time, optimize resource deployment, and reduce losses.

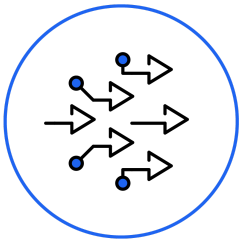
Seismologists are deploying machine learning to expand and accelerate earthquake monitoring. Stanford's Earthquake Transformer, trained on one million hand-labeled seismograms, identified over 21,000 events in five weeks of Japan seismic data—2.5× more than human analysts—using just 18 of 57 monitoring stations. The model excels at spotting tiny quakes often missed by traditional methods and processes months of expert work in 20 minutes on a standard computer. Expanded small-quake detection promises more accurate hazard maps and deeper understanding of fault structures, aiding preparedness for major events.

Healthcare & Life Sciences: Cedars-Sinai's AI-powered virtual-care platform handled 42,000 patient encounters and delivered "optimal" treatment recommendations 77 percent of the time, freeing physicians for complex cases.

Kaiser Permanente Group of Northern California piloted ambient AI scribes to reduce clinicians' documentation burden and improve patient interactions. Over 10 weeks, 3,442 physicians used the tool in more than 303,000 encounters, with results showing significant reductions in after-hours EHR work and note-taking time, especially among high-use physicians, while maintaining high documentation quality. Both clinicians and patients reported improved visit experiences, with less screen time and more direct engagement.

Agriculture: Facing acute labor constraints—56 percent of California farmers (and 70 percent of seasonal-crop growers) report unfilled positions—growers are deploying AI-driven robotics. Bonsai Robotics' autonomous harvesters, trained on orchard computer-vision data, now navigate almond and pistachio rows without human drivers after a $15 million funding round in 2025. Robotic tools for crop monitoring are also helping to save time and lower costs. Meanwhile, UC Davis's AI Institute for Next Generation Food Systems is applying big-data models to California's 13 million-ton tomato harvest, predicting in-transit damage and cutting processing losses for canneries like Pacific Coast Producers (UC Davis).

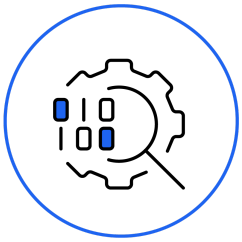
***Semiconductor & Advanced Manufacturing*:** Bosch's planned $1.9 billion chip-fabrication expansion in Roseville will be the largest such project in California in 30 years and will rely on AI-enabled predictive maintenance and yield analytics, supporting 1,700 jobs.



Conclusion

California's early AI gains offer a glimpse of a more productive, inclusive economy—one where teachers generate lesson plans in minutes, almond growers minimize chemical inputs, and port trucks spend less time idling. Realizing this vision depends on choices we make today about access, training, and responsible governance.

OpenAI looks forward to working with policymakers, workers, educators and the public across the state to better understand how AI is changing the economy and make sure that benefits resulting from AI are shared widely rather than concentrated only in Silicon Valley.



About ChatGPT

ChatGPT is the fastest-adopted consumer technology in history, reaching 1 million users in five days, 100 million users in two months, and 700 million users today. Since launch, we have seen a dramatic increase in use of ChatGPT for work. Today, 28% of employed US adults report using ChatGPT at work, compared to just 8% in 2023.

Users send 3 billion messages to the platform per day globally, and more than 330 million daily in the US. This breadth of use offers a unique window onto AI's impacts on the economy. Today, we're seeing the most use in support of learning and improved written communication: 20% and 18% of all US-based messages, respectively.

But Americans are turning to ChatGPT in nearly every aspect of life, and between its widely varied use cases, broad and still growing adoption, and free availability, ChatGPT on its own will be a significant driver of greater personal productivity and a key indicator of AI's impacts on the economy. Below, we explore the drivers of the unprecedented adoption rate of ChatGPT and offer insights that draw on millions of anonymized and aggregated real-world ChatGPT conversations in the US along with economic studies, external surveys, and forecasts to assess the potential for AI to contribute to US economic growth.

About OpenAI

OpenAI wants to ensure that as AI advances, it benefits everyone. We're building AI to help people solve hard problems because by helping with the hard problems, AI can benefit the most people possible—through more scientific discoveries, better healthcare and education, and improved productivity. We're off to a strong start, creating freely available intelligence being used by 700 million people around the world. We believe AI will scale human ingenuity and drive unprecedented economic growth and new freedoms that help people accomplish what we can't even imagine today.

Cover image created with ChatGPT