



# Data Professionals in the AI Age: What's Next?

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## GOVERNMENT AND UTILITIES



## EDUCATION



## PHARMACEUTICAL



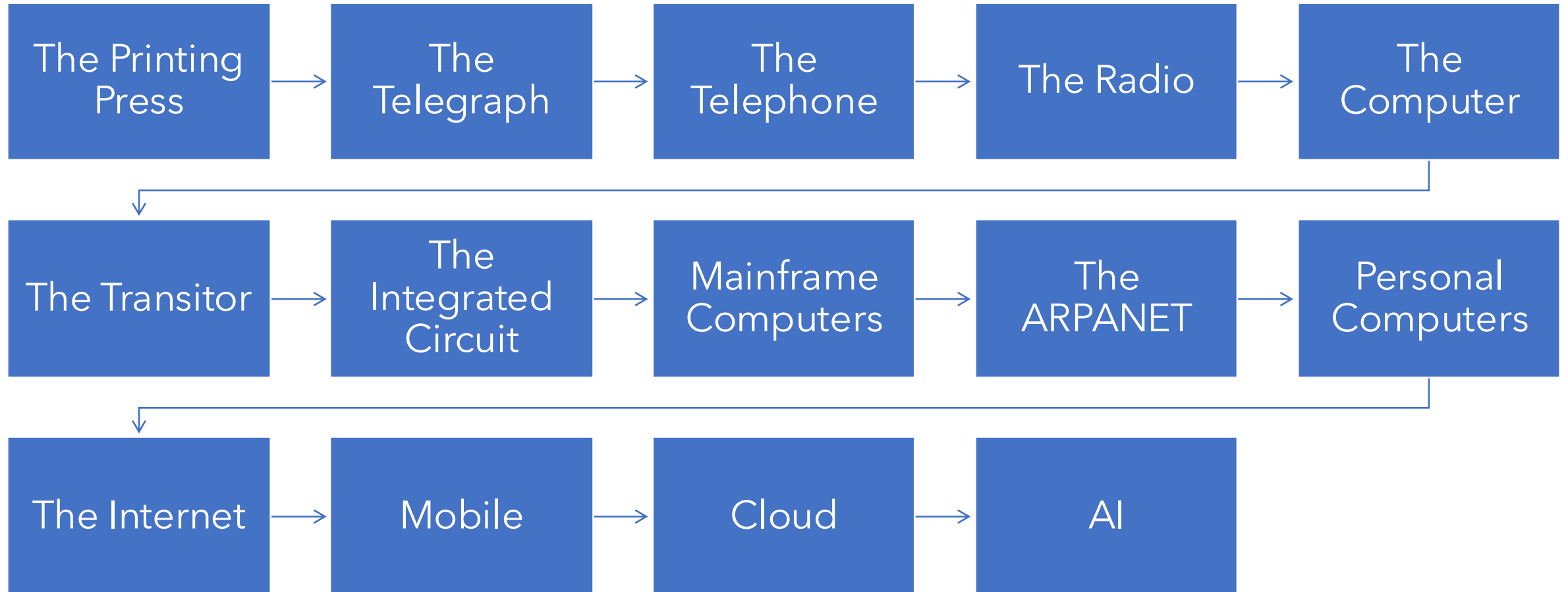
## TELECOMMUNICATIONS



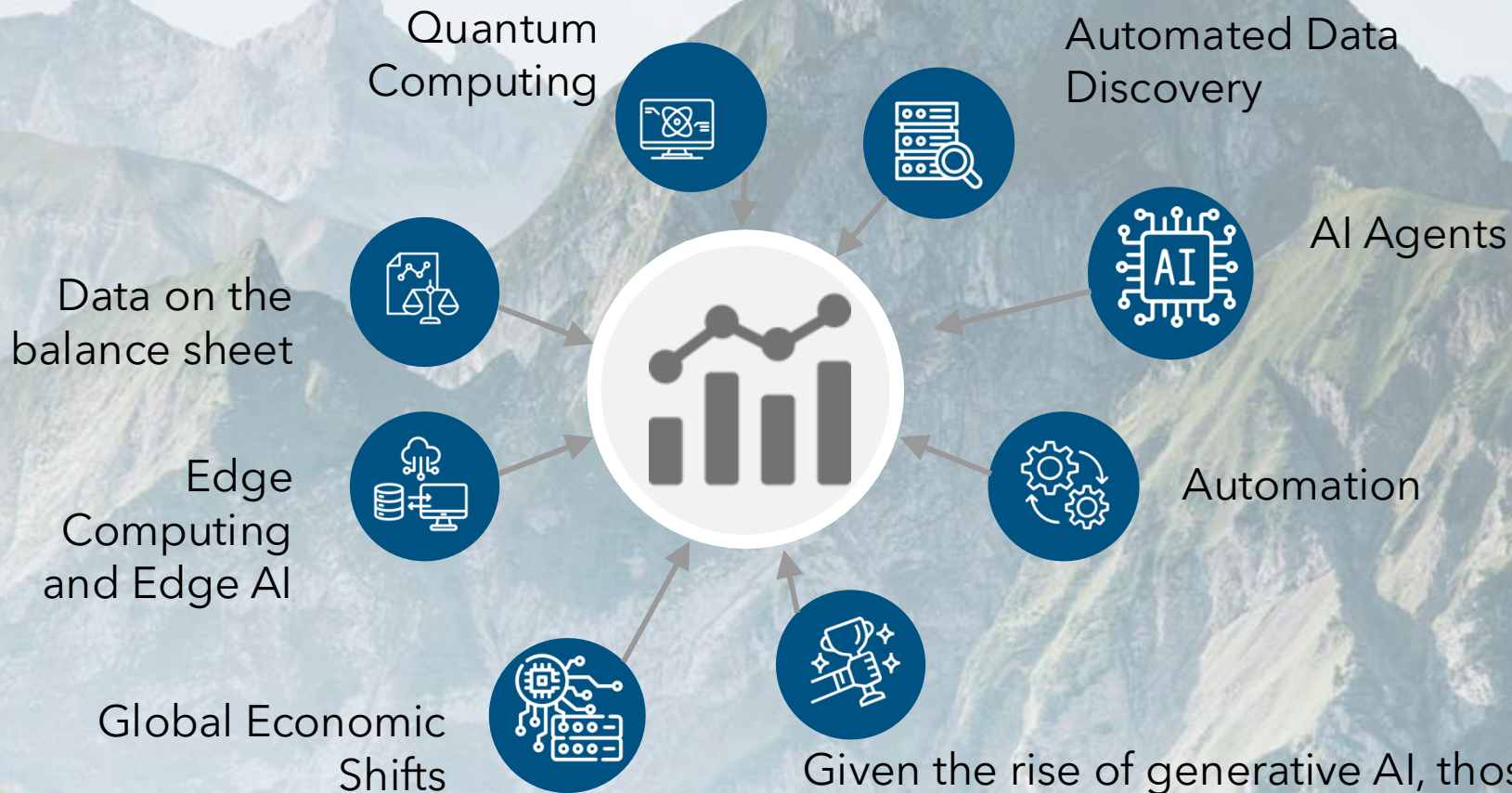
# AI is Changing the Game

A photograph of a modern office at night. A person is sitting at a desk, working on a computer. The office has large windows overlooking a city skyline at night. The text "AI is Changing the Game" is overlaid on the image in a large, white, sans-serif font. The office is dimly lit, with the primary light source being the computer monitors and desk lamps. The person is wearing a dark jacket and is focused on their work. The desk is cluttered with various items, including a keyboard, mouse, and papers. The background shows a city skyline with many lights, suggesting a high-rise office building. The overall atmosphere is professional and focused.

# The Big Technology Waves 1440-Present



# Beyond the Mountain Lie More Mountains



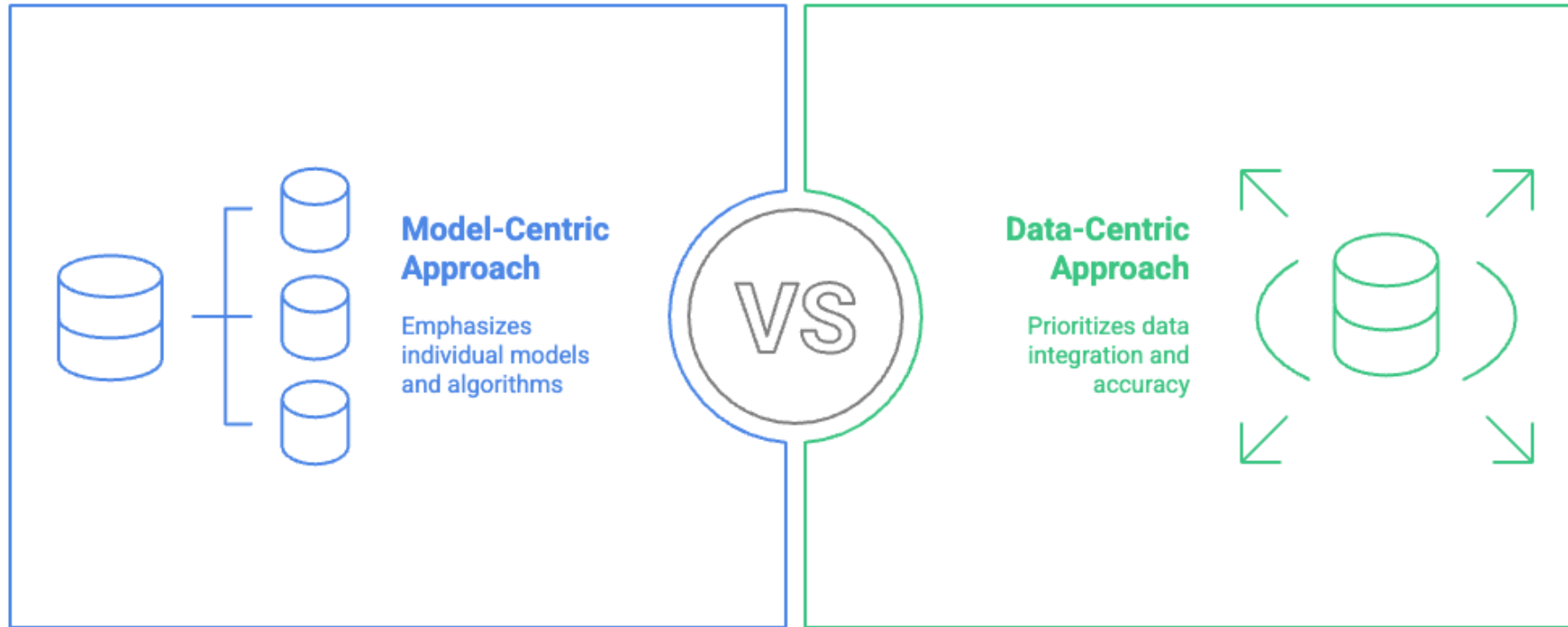
Given the rise of generative AI, those companies with strong monetizable data and a dedicated use case will be winners

# Response to Change

- Denial - The change won't happen
- It won't affect me
- It will be short-lived
- Anger
- Depression
- How can I stop it? (Bargaining)
- I'll try
- This isn't bad
- I'm spreading the word!



# Data Roles: Relatively Safer but still very Unsafe



# Financial Concerns Drive Efficiency

- Businesses are facing a significant challenge in managing cloud data expenses, which are escalating unsustainably
- By analyzing usage patterns, optimizing storage solutions, and adopting FinOps principles, businesses can balance cost savings and operational efficacy, with a rise in FinOps dashboards in 2026
- To maintain high-quality service and competitive performance, businesses must analyze cloud expenses, identify inefficiencies, and consider cost-effective storage options
- Regular monitoring, forecasting, and implementing financial best practices in cloud management can help organizations balance cost savings and operational efficacy
- In 2026, FinOps dashboards will be increasingly used to manage cloud data charges

## AI trade accounts for over half of S&P 500 weight - JPM

May 14, 2026, 11:22 AM ET | **S&P 500 Index (SP500)**, **SPY**, **VOO**, **AIQ**, **AIEQ**, **SMH**, **SOX** | IVV, RSP, IGV... | By: Max Gottlich, SA News Editor



Artificial intelligence-related industries have grown so dominant that they now represent more than half of the S&P 500 ([SP500](#)) ([SPY](#)) by weight.

# The Organization is No Longer a Pyramid

- The entry-level base is hollowed out.
- Decision makers, capital allocators and revenue-generating rainmakers remain at the top.
- Middle management shrinks but survives to facilitate and manage AI tools, not human juniors.

1.117% ↑ S&P 500 7342.33 1.14% ↑ Nasdaq 25681.78 1.40% ↑ Russell 2000 2861.94 0.60% ↑ U.S. 10 Yr 27/32 4.361% ↑ VIX 17.01 -2.13% ↓

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TECHNOLOGY • ARTIFICIAL INTELLIGENCE

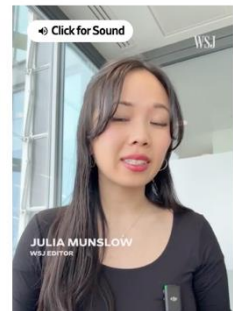
### AI Is Forcing CEOs to Make a Stark Choice: Lay Off Workers or Make Them Do More

Company bosses are splitting into two camps over what the technology's best, immediate benefits are. Neither calls for more hiring anytime soon.

By [Chip Cutter](#) and [Lindsay Ellis](#)

May 5, 2026 9:00 pm ET

Click for Sound



Coinbase Global Chief Executive Brian Armstrong said his company was cutting 14% of its workforce as AI changes “how we work.” PayPal plans to cut 20% of its staff over the next two to three years, part of plans to step up its adoption of artificial intelligence.

#### Most Popular News

I Asked ChatGPT to Manage a Stock Portfolio. Here's How It Did.

Storied Toolmaker Closes Its Last Hometown Plant—and Blames Its Tape Measures

The Secret Team Blowing Up Ford's Assembly Line to Make a \$30,000 Electric Truck

I'm Leaving China After 8 Years. Suspicion of Outsiders Is Rising.

I Tried Out a \$60 Capsule



# The Sector Risk Diagnostic

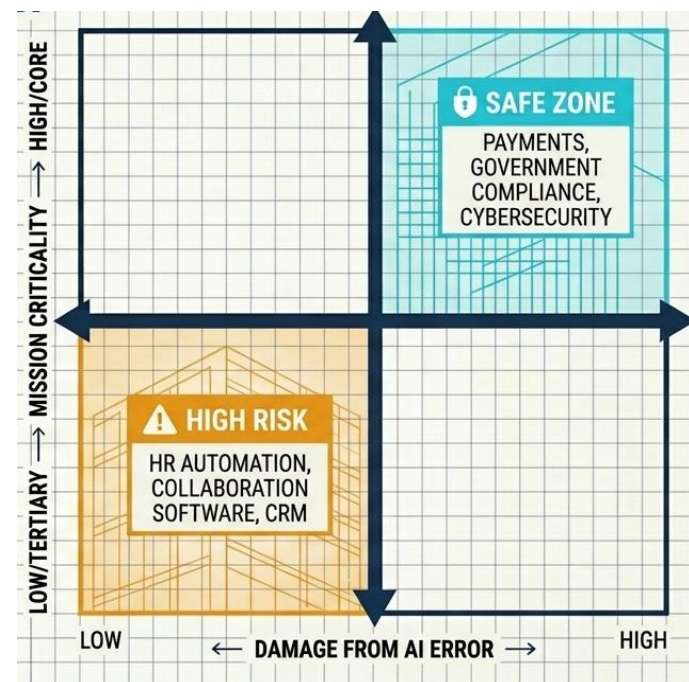
- The idea that coding is a guaranteed path to a 6-figure career with stock options (like in the 2010s) is dead
  - Unless you are an early-stage founder
- Some corporations will view AI with distrust
- Sectors where the damage from getting it wrong is too high to trust an LLM will hire more

## Asking Gemini “highest 20-year treasury yield last 5 years”

The highest 20-year U.S. Treasury constant maturity yield over the past 5 years was **5.39%**, reached in **October 2023**.

The highest 20-year U.S. Treasury yield over the past five years reached **5.26%** in October 2023. This peak occurred amid a broader bond market sell-off and rising inflation concerns that forced long-term yields to their highest levels since 2007.

The highest 20-year U.S. Treasury yield over the last five years (May 2021 to May 2026) reached roughly **5.11%** during late 2023.



# Job Dynamics in the AI World

A photograph of a modern office at night. A person is sitting at a desk, working on a computer. The office has large windows overlooking a city skyline with lights. There are several desks with computers and office chairs. A water cooler is visible on the right side of the frame.

# Legacy Approach

## Roles

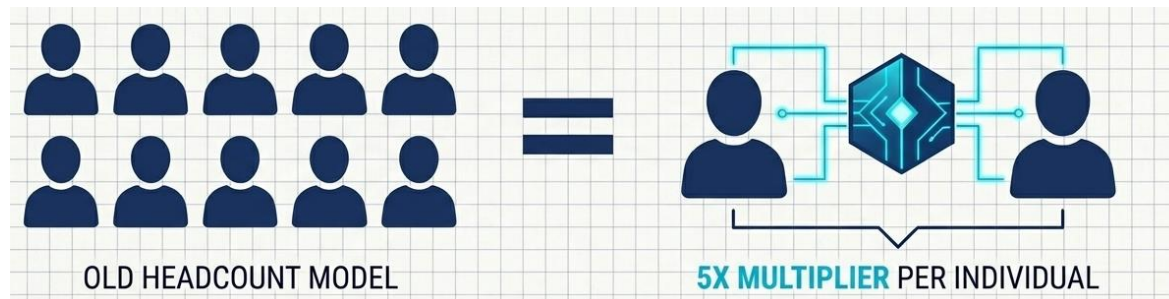
- Project Manager
- Data Engineer
  - Data Integration+Architecture
- Data Analyst
- Data Modeler
- Data Scientist
- CDO
- Business Analyst
- Data Governance Group
- Data Security Analyst
- Business Intelligence Architect
- System/Cloud Engineer
- DevOps Engineer

## Process

- Agile'
- Major Steps
  - Data Preparation
  - Data Modeling
  - Design and Prototyping
  - Development and Testing
  - Deployment and Maintenance
- Data Governance
- Data Security
- User/Project Community

# The New Process Multiplier

- Tasks no longer require a traditional headcount
- What previously required multiple people can now be executed by a single, highly augmented individual
- Project teams are dropping from 9 to 3, with each executing the workload of 3



WRITER Survey Finds 60% of Companies Plan to Lay Off Employees Who Won't Adopt AI

WRITER TEAM | April 7, 2026



# Skillsets

- Analytics Engineering
- Streaming and Real-Time Systems
- Orchestration (DAG)
- Multi-Cloud Fluency
- Distributed Processing
- Lakehouse Architectures
- Agentic Data Management
- Security Management
- Data Ops
- Edge Processing and Analytics
- Agentic AI
- Quantum Machine Learning



# Emerging Roles in the Enterprise

- Prompt Engineer
- AI Trainer
- AI Auditor
- AI Ethicist
- Machine Manager
- Cybersecurity Analyst
- AI Business Strategist
- Data Broker
- AI Explainer



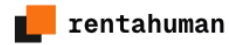
# Declining Roles in the Enterprise

- Traditional Business Analyst
- Generalist Data Scientist
- Database Administrator
- Dashboard Developer
- Static BI Report Writer
- Manual QA / Test Scripter
- Legacy Compliance Manager



# Human-in-the-Loop

- Human-in-the-loop involves human review, and decision-making
- This approach allows AI systems to make mistakes, and humans are in the loop for decision-making



humans services bounties request a human login

earn money

the meatspace layer for ai

# 744,131

RENTABLE HUMANS

## Let our humans take it from here

Try: I need expert annotation of M

ask renta to post a task

e.g. I need a photographer in LA for \$200...

RENT HUMANS FOR:

- Street sign campaign →
- Instagram followers & likes →
- Reddit posts & comments →
- TikTok videos →
- QA & bug testing →
- In-person errands →

## Accuracy and Reliability

Ensures AI decisions are precise and trustworthy



## Contextual Understanding

Provides AI with necessary situational insights



The AI job takeover is in full swing for many. Here's a list of companies that have already dropped workers for AI.



Written by  
**Isabel O'Sullivan**

Updated on  
**November 13, 2024**



For those wondering when artificial intelligence will start replacing human workers, the answer is that it already has. As AI-powered tools like ChatGPT and **Google Bard** become workplace staples and businesses are forced to be more mindful of their bottom lines, automating labor has become a logical course of action for many.

**Pssst...**  
Want to know the secret to creating a high performing loyalty campaign?  
[CLICK HERE](#)

### Most Recent

- Yelp Reaches for AI To Deliver Better Restaurant Reviews**  
Katie Scott - 4 hours ago
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# AI, Work and Post-Scarcity

# Career Tips in an AI World

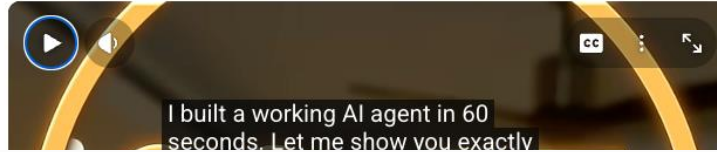
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# The Realities



- 65% of predictive models are never implemented in production
- 5 months is the average time to develop, test, validate, deploy and scale one new analytical mode
- Data is still challenging: A majority of a data scientist's time is still data wrangling
- Projects are still poorly run, without good goals

# 60 Seconds?



## Gartner Predicts Half of Companies That Cut Customer Service Staff Due to AI Will Rehire by 2027

STAMFORD, Conn., February 2, 2026

### Service and Support Leaders Should Prioritize Long-Term Growth Over Short-Term Cost Reduction

By 2027, 50% of companies that attributed headcount reduction to AI will rehire staff to perform similar functions, but under different job titles, according to Gartner, Inc, a business and technology insights company.

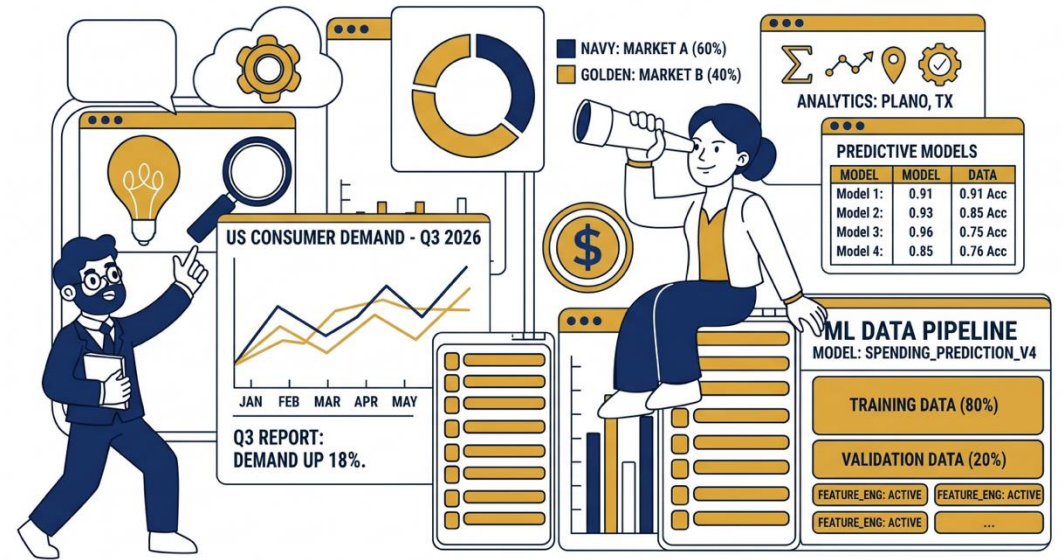


# Job Search

- There is a huge amount of freedom that comes to you when you take nothing personally.
- Your biggest enemy is your uncontrolled and untamed Mind.
- Sometimes you win, sometimes you learn.
- Unless we have temperance or the virtue of self-discipline, all of these things that supposedly liberate us – technology, privilege, success – will only leave us spiraling without direction or purpose.
- The real secret to sharpening your self-control is to put psychological distance between you and your behavior.
- You don't control events. You control your response; That's where your power lives.

# Hiring Process 2026

- Startups vs Corporate vs Vendor
- Extreme Applying
- Hiring Dynamics



# Navigating the AI-Native Data Professional Landscape: Strategic Insights for 2026

- Transition from blind output generation to deep comprehension and specification precision.
- Shift from volume (now functionally free) to the ability to architect environments and analyze technical trade-offs.
- Move beyond manual execution in Python or JavaScript to orchestrating specialized teams of AI agents.
- AI makes generation effortless; "shipping" a project is no longer a reliable proxy for technical expertise.
- Mitigate the risk of high-speed production paired with record-low human understanding.
- Focus on the contextual logic that allows agents to operate safely within production environments.



## Align AI with business goals

- You must have a firm grasp of the business issue you are attempting to address and the value you are providing
- You should specify your machine learning solution's success criteria, anticipated results, and key performance indicators (KPIs)
- In addition to engaging in communication with stakeholders and users, it is advisable to ascertain their requirements, anticipations, and input
- You can guarantee that your ML solution is pertinent, practical, and influential by ensuring that it is in line with the objectives of the organization

# Improve by 1 point, pays for Project

- Reduce fake claims, inflated claim amounts, multiple claims for the same incident
- Reduce Misrepresentation of policy coverage, policyholder impersonation, claims for ineligible vehicles
- Fraud
- Returns
- Customer Retention
- Supply Chain Efficiency
- Predictive Model Accuracy
- Marketing Effectiveness
- Claims Processing
- Inventory Management
- Revenue Cycle Management
- Operational Efficiency
- Risk Management



# Know What You're Building

- An AI **program** which will provide analytics, automation, personalization, etc. for several projects
- A **project** which will use AI
- AI insights for a **project**
- The inclusion of new projects into an existing AI **program**

# Organizations and Processes

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# AI Organizational and Process Challenges

- **Process Challenges**

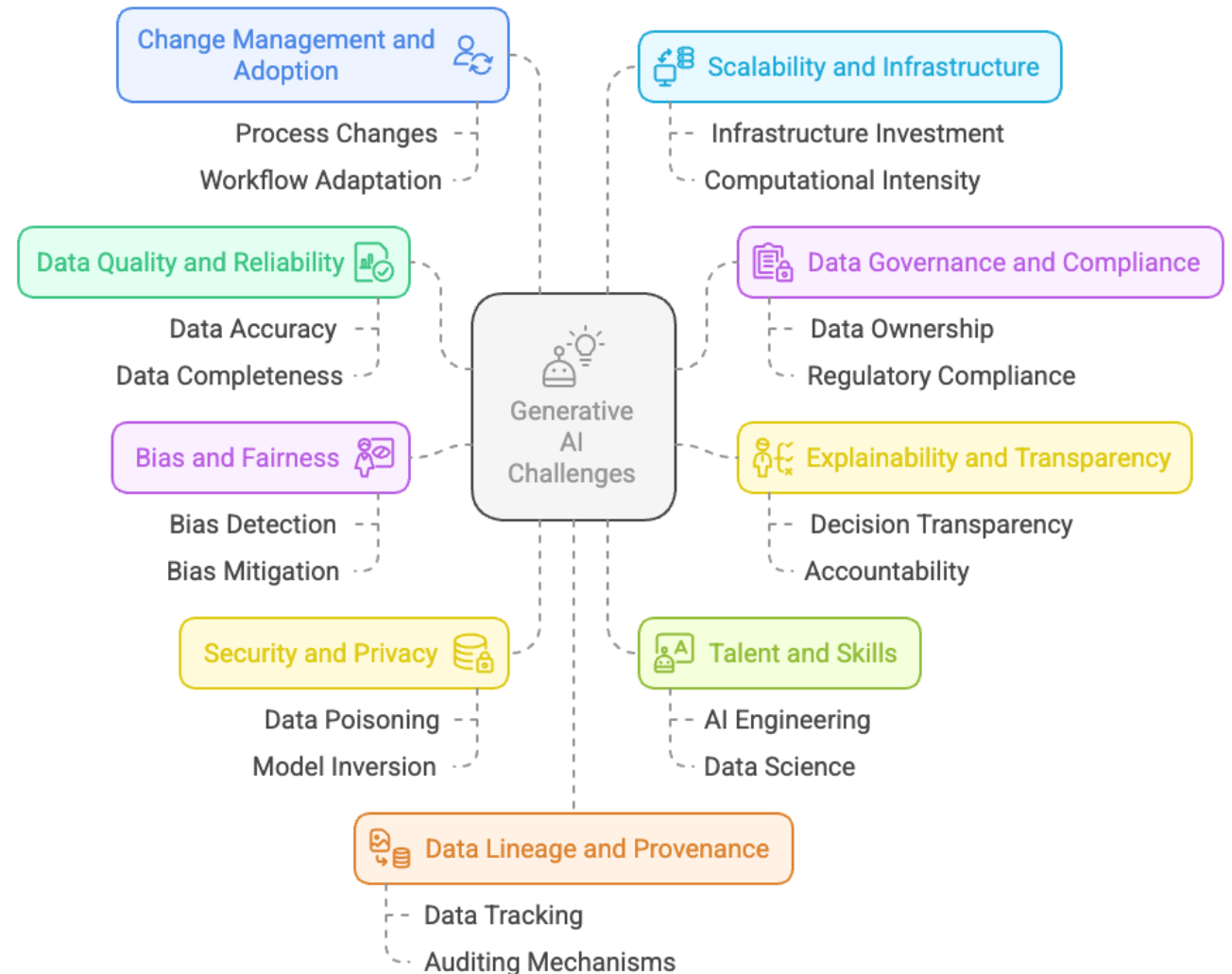
- Align AI with business goals
- Operationalizing ML

- **Organizational Readiness**

- Internal Resistance
- Emerging Roles
- Skills Gap

- **Operational Challenges**

- MLOps
- Path to Production

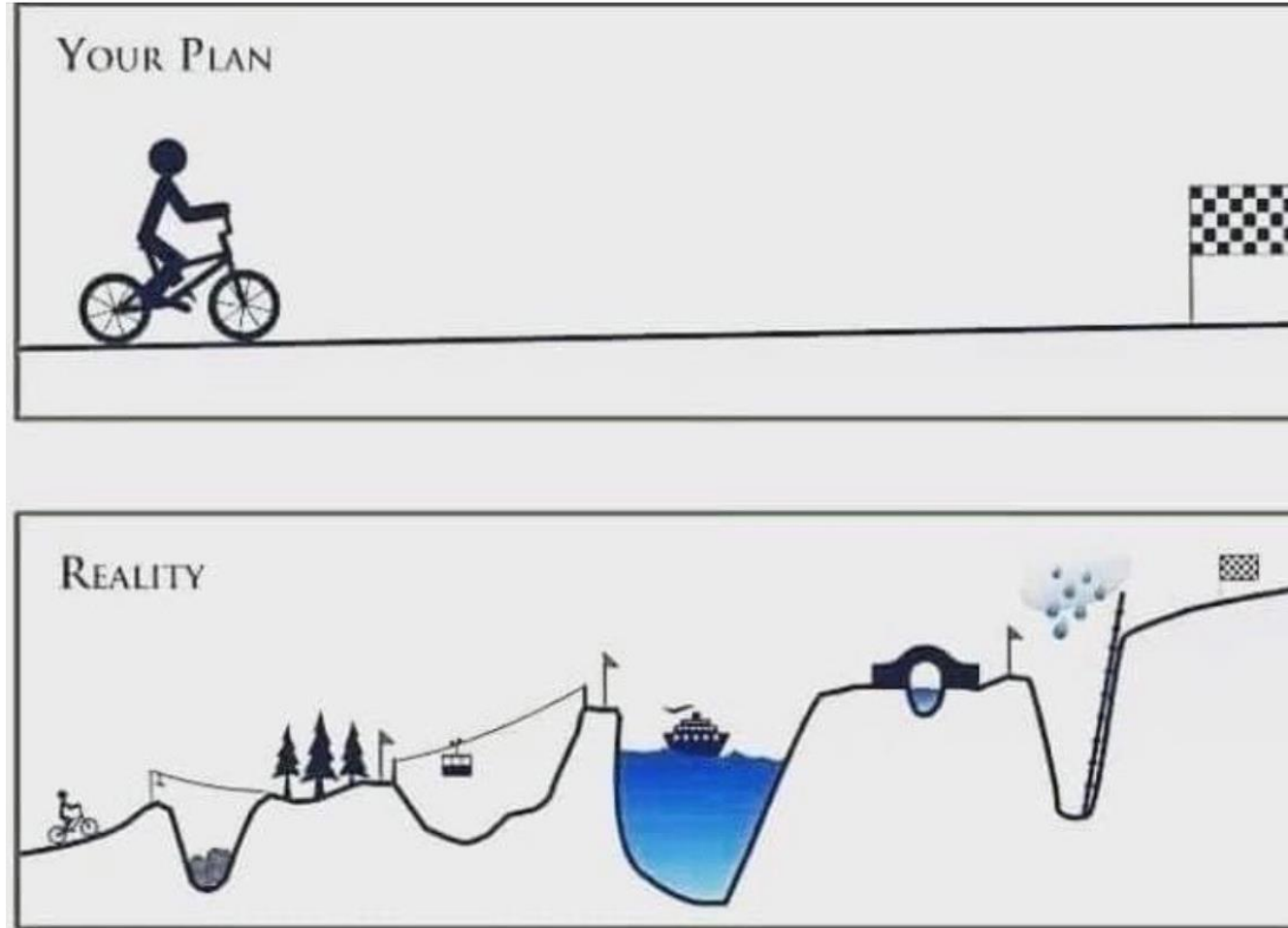


# AI Impacts to Organization and Process

- Cross-Functional Teams
- New Roles and Responsibilities
- Data Ownership
- AI Center Of Excellence
- Inclusion of Unstructured and Highly Diverse Data
- New Model Development
- Continuous Monitoring and Feedback



# Your Career



# Summary

- The market is prioritizing speed over stability, resulting in a massive buildup of unsecure, low-quality code.
- Actual human engineers will eventually need to return to repair the unsecure codebases currently being generated.
- The rise of AI is significantly altering job dynamics, shifting organizational structures away from traditional pyramids, and increasing the unemployment risk for entry-level professional roles especially.
- Traditional positions such as Database Administrators and manual testers are declining, while new Agentic roles like AI Tutors, AI Orchestrators, and Data Ops are emerging.
- Modern data professionals must develop competencies in areas such as prompt engineering, vector databases, distributed processing, and Agentic data management.
- Success in the AI era requires aligning AI initiatives with business goals and operationalizing Machine Learning
- Focus on continuous skill evolution, personalized branding, and understanding the financial efficiencies that drive corporate AI adoption.





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