

Predictive AI's New Killer App: Making Agents Launch-Worthy

DataCamp RADAR 11x
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Co-founder & CEO, Gooder AI

Founder, Machine Learning Week

Author, *The AI Playbook*

Predictive AI is positioned to realize genAI's bold, often overzealous promise of autonomy – or at least a great deal of it.

data **business**
machine **prediction**
learning



predictive AI

predictive analytics

Eric Siegel

Gooder AI



boost sales

cut costs

combat risk

prevent fraud

fortify healthcare

streamline logistics

conquer spam

win elections



“

Machine learning's practical deployment represents the forefront of human progress: improving operations with science.

”

Morgan Vawter
Chief Digital Officer, Unilever

Eric Siegel

Gooder AI

Prediction as a capability -- calculating probabilities -- is the Holy Grail for improving large-scale operations.

Quote from the foreword of *The AI Playbook*, by Eric Siegel (MIT Press, 2024).

<https://www.predictiveanalyticsworld.com/machinelearningtimes/three-best-practices-for-unilevers-global-analytics-initiatives/13457/>

Predictive AI Usually Fails to Launch



Only 22% of data scientists say their new initiatives usually deploy.

—Rexer Analytics

Eric Siegel

Gooder AI

"Average ROI on enterprise-wide initiatives is just 5.9%,—well below the typical 10% cost of capital."

ibm.com/thought-leadership/institute-business-value/en-us/report/ai-capabilities

"Only 10% of companies obtain significant financial benefits from AI technologies."

MIT Sloan & BCG

<https://sloanreview.mit.edu/projects/expanding-ais-impact-with-organizational-learning/>

Survey: Machine Learning Projects Still Routinely Fail to Deploy - by Eric Siegel

<https://www.kdnuggets.com/survey-machine-learning-projects-still-routinely-fail-to-deploy>

43% say that 80%+ fail

Only 22% of data scientists say "new capability" initiatives usually deploy

<https://www.rexeranalytics.com/data-science-survey>

Only 11% of data scientists say their models always deploy.

—Rexer Analytics

"I predict we will see the third AI Winter within the next five years."

- Usama Fayyad, the world's first CDO, June 2022

The greatest tool is the hardest to use. Machine learning is the world's most important general-purpose technology – but it's notoriously difficult to launch. Outside Big Tech and a handful of other leading companies, machine learning initiatives routinely fail to deploy, never realizing value.

McKinsey's AI Index reveals that the "divide between AI leaders and the majority of companies still struggling to capitalize on the technology" is only widening.

A report prepared by the AI Journal based on surveys by Sapio Research showed that the top pain point for data teams is "Delivering business impact now through AI." Ninety-six percent of those surveyed checked that box. That challenge beat out a long list of broader data issues outside the scope of AI per se, including data security, regulatory compliance, and various technical and infrastructure challenges.

According to a survey of senior executives by ESI ThoughtLab, "the average return on all AI investments by company is only 1.3%" and "only 20% of AI projects are in widespread deployment."

From: Survey of senior executives by ESI ThoughtLab

https://resources.appen.com/wp-content/uploads/2020/09/ESITL_Driving-ROI-through-AI_FINAL_September-2020.pdf

"Many AI initiatives fail. Seven out of 10 companies surveyed report minimal or no impact from AI so far."

<https://sloanreview.mit.edu/projects/winning-with-ai/>

McKinsey: "out of the 3,073 respondents, only 20 percent said they had adopted one or more AI-related technology at scale or in a core part of their business."

<https://www.mckinsey.com/~media/mckinsey/industries/advanced%20electronics/our%20insights/how%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/mgi-artificial-intelligence-discussion-paper.ashx>

For many more such factoids and sources, see "The AI Playbook"'s chapter 0 (zero) book notes:

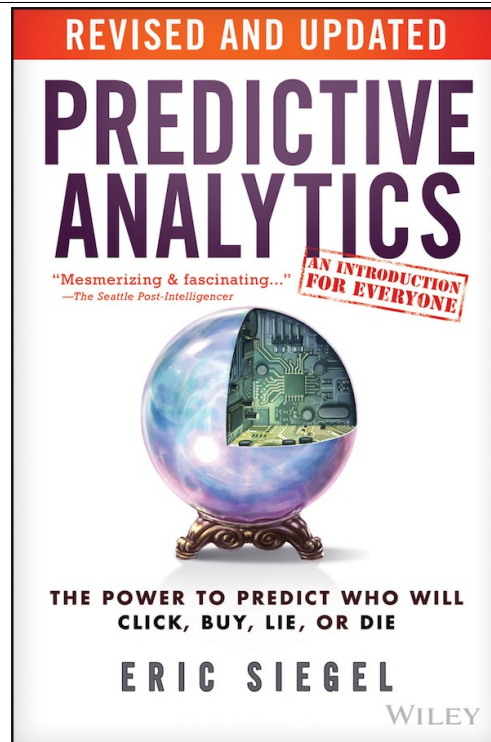
<https://www.machinelearningkeynote.com/the-ai-playbook-book-notes>



Technical capability

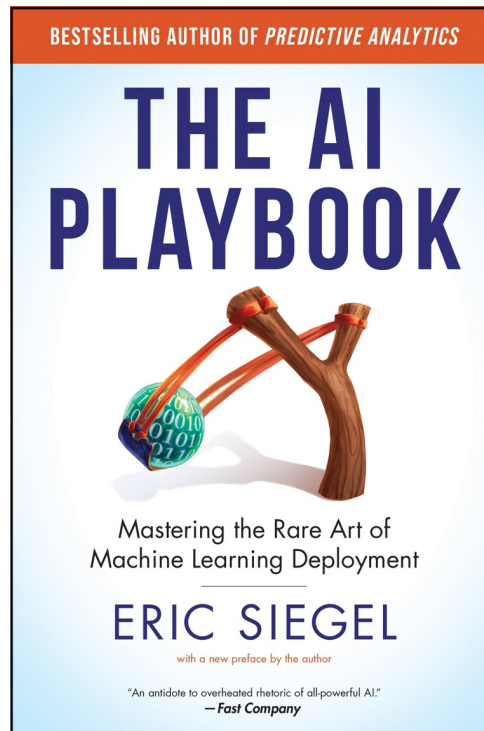
Deployed value

2013
2016



<https://www.machinelearningkeynote.com/predictive-analytics>

**2024
2026**



bizML.com

<http://www.bizML.com>

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FORMERLY

Predictive
Analytics
WORLD

The image features a dark blue background with a network of glowing blue and purple nodes connected by thin lines, creating a complex web-like pattern. In the center, there is a bright yellow rectangular box with a black border containing the text "GOODER AI" in bold, black, sans-serif capital letters. Below this box, the text "Plan, sell, and greenlight predictive AI deployment." is written in a bold, white, sans-serif font.

GOODER AI

**Plan, sell, and greenlight
predictive AI deployment.**

<https://www.gooder.ai/>

Today's model development is missing the ability to test and visualize the business performance – so it doesn't maximize for business objectives.

Gooder AI addresses a fundamental flaw with the typical model development process: It evaluates models in terms of business metrics like profit/ROI/savings, rather than only technical metrics like AUC/precision/recall.

Product overview document:

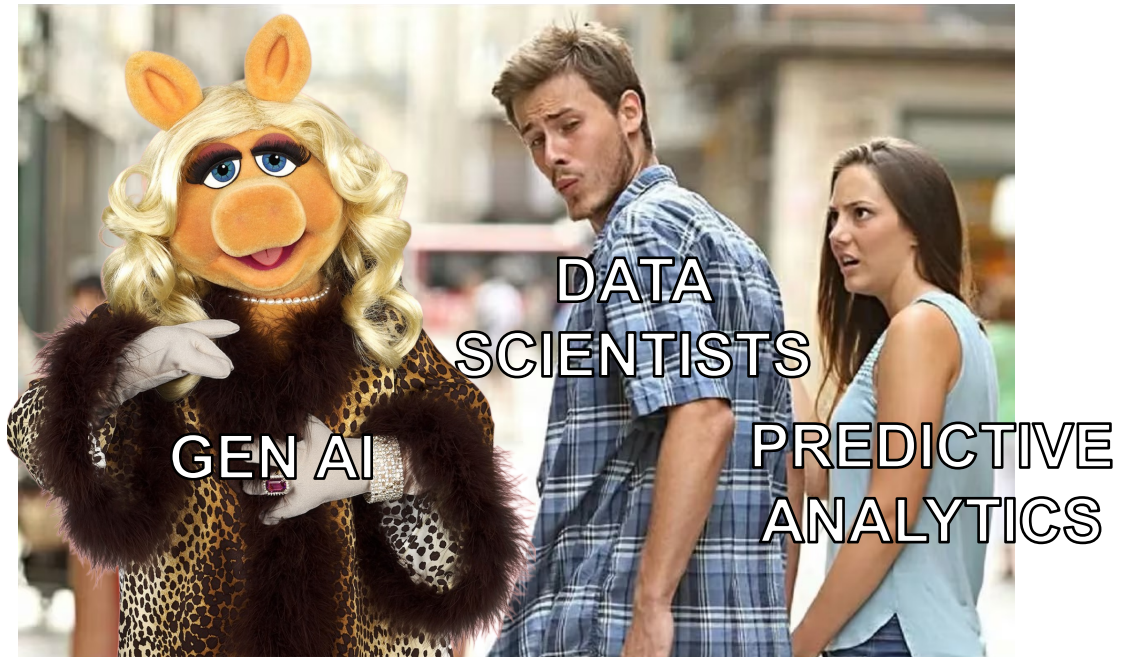
<https://docs.google.com/document/d/1AVzEH9vo1pMExZ7V1Uwyf-pnnvX6kga9vEzhuwCQzkg/edit?usp=sharing>

Gooder AI maximizes the value of machine learning by testing and visualizing its business performance.

Validate any ML model for max value.

Universal ML validation to maximize value capture.

Empowers data scientists and orgs to optimize for the business objective.



Eric Siegel

Gooder AI

GenAI is glamorous and gets the spotlight. It gets the attention -- but it is overly-hogging (get it?) attention, resources, and investments.



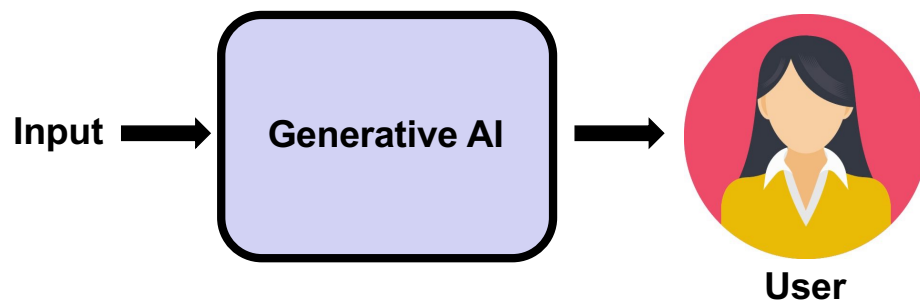
Eric Siegel

Gooder AI

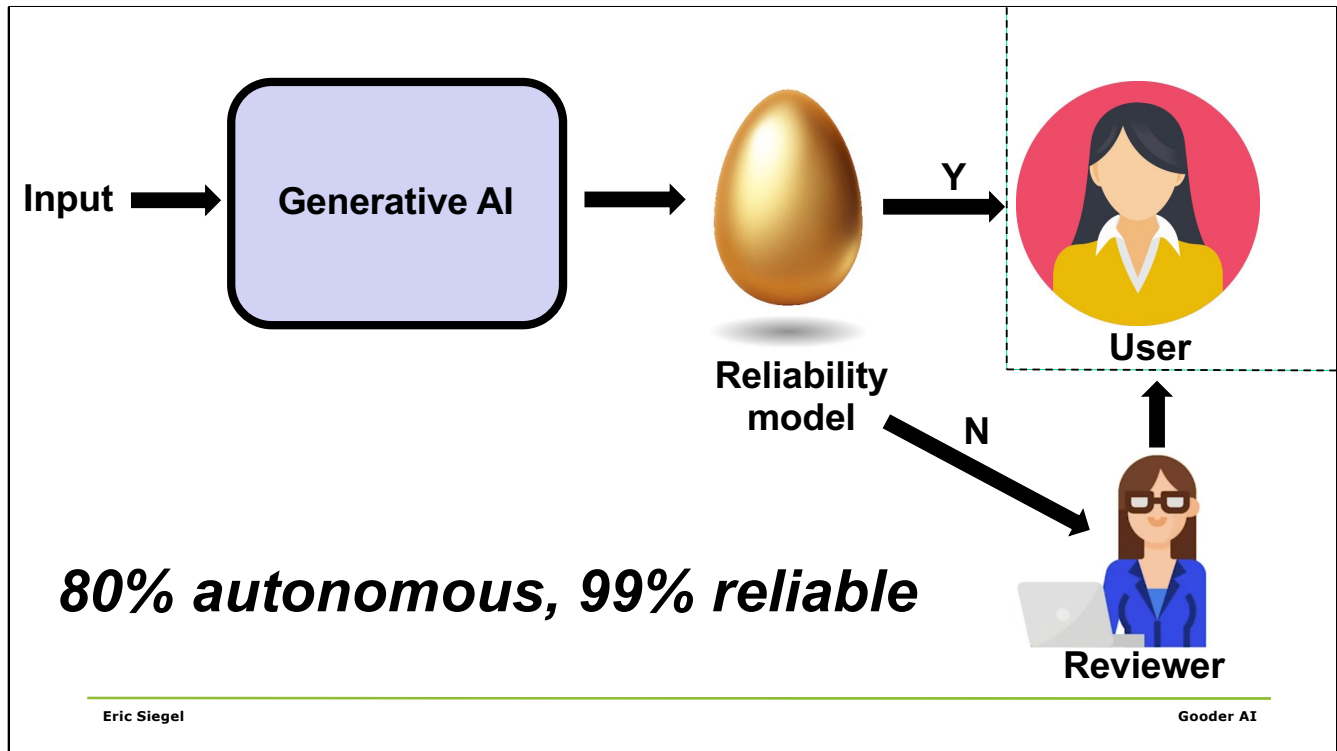


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Gooder AI



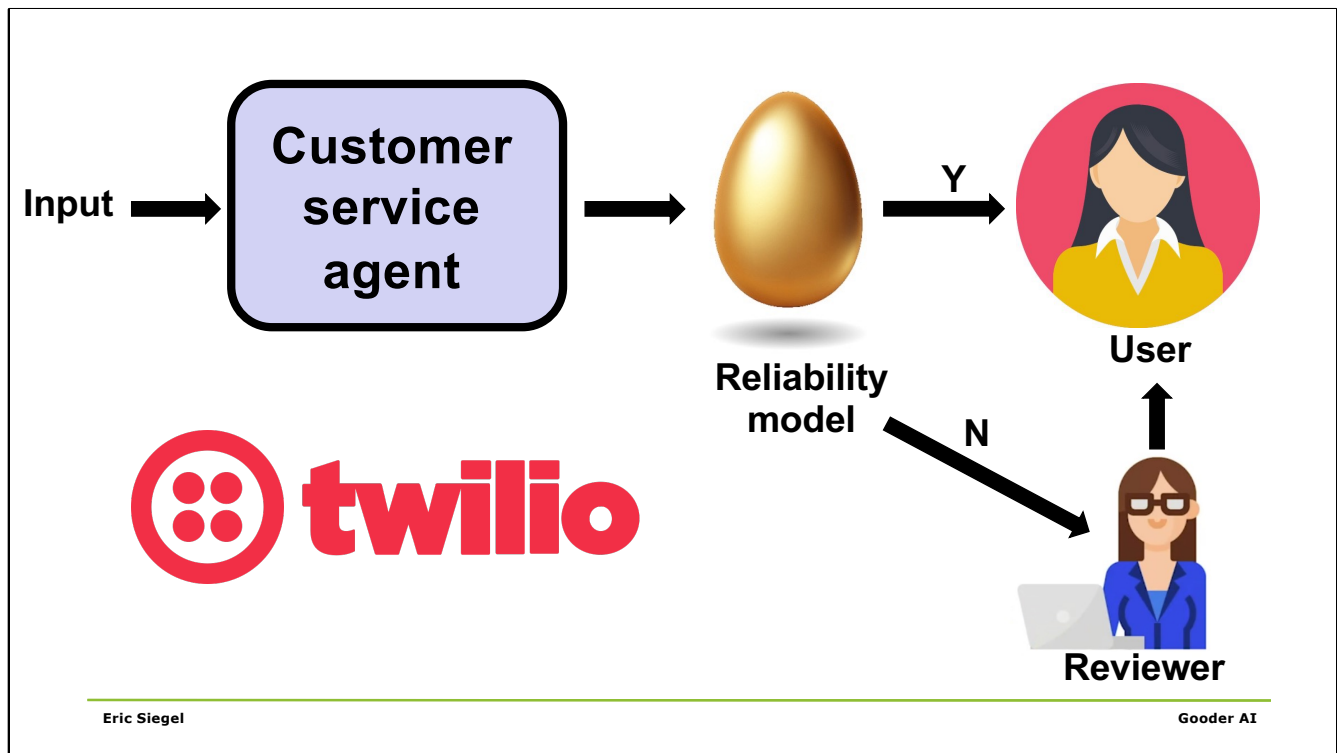
100% autonomous, 95% reliable



More about threshold-based agent escalation:

<https://towardsdatascience.com/building-enterprise-agent-systems-that-people-can-trust-verify-and-improve/>

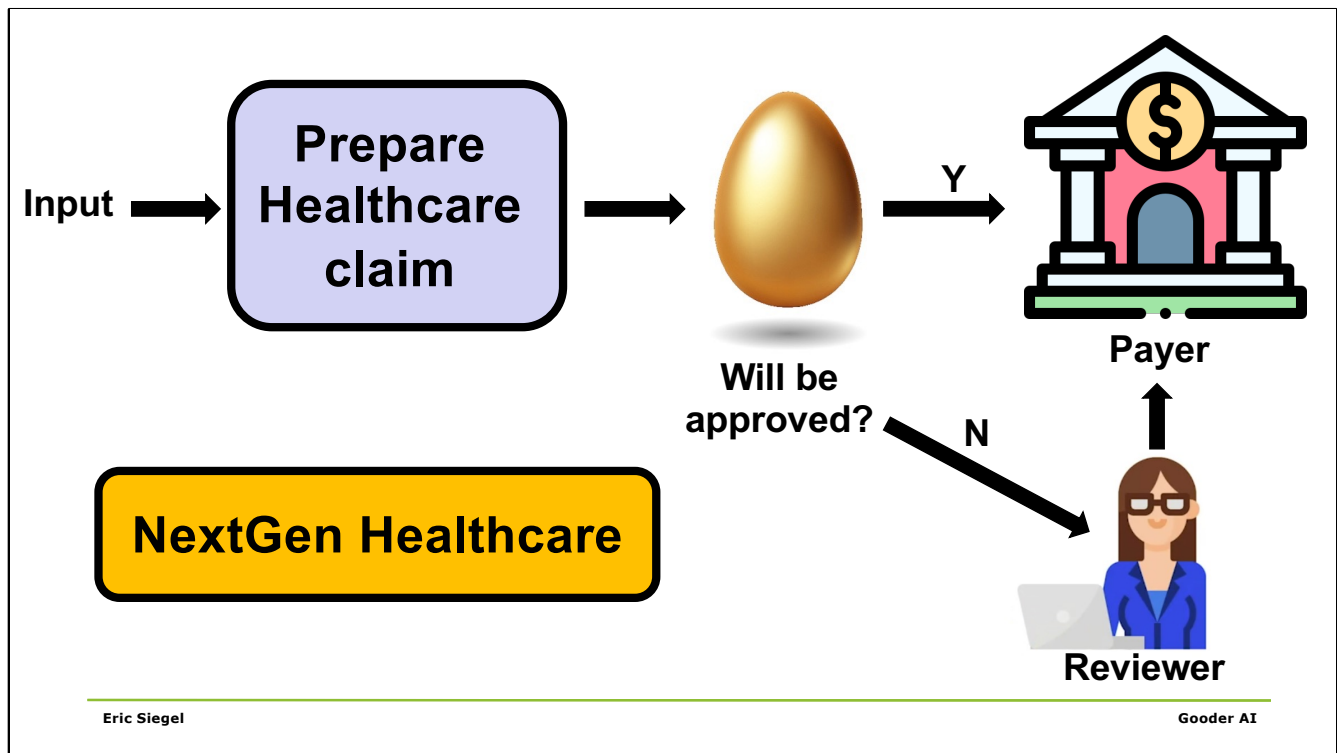
Hallucination detection: <https://www.nature.com/articles/s41586-024-07421-0>



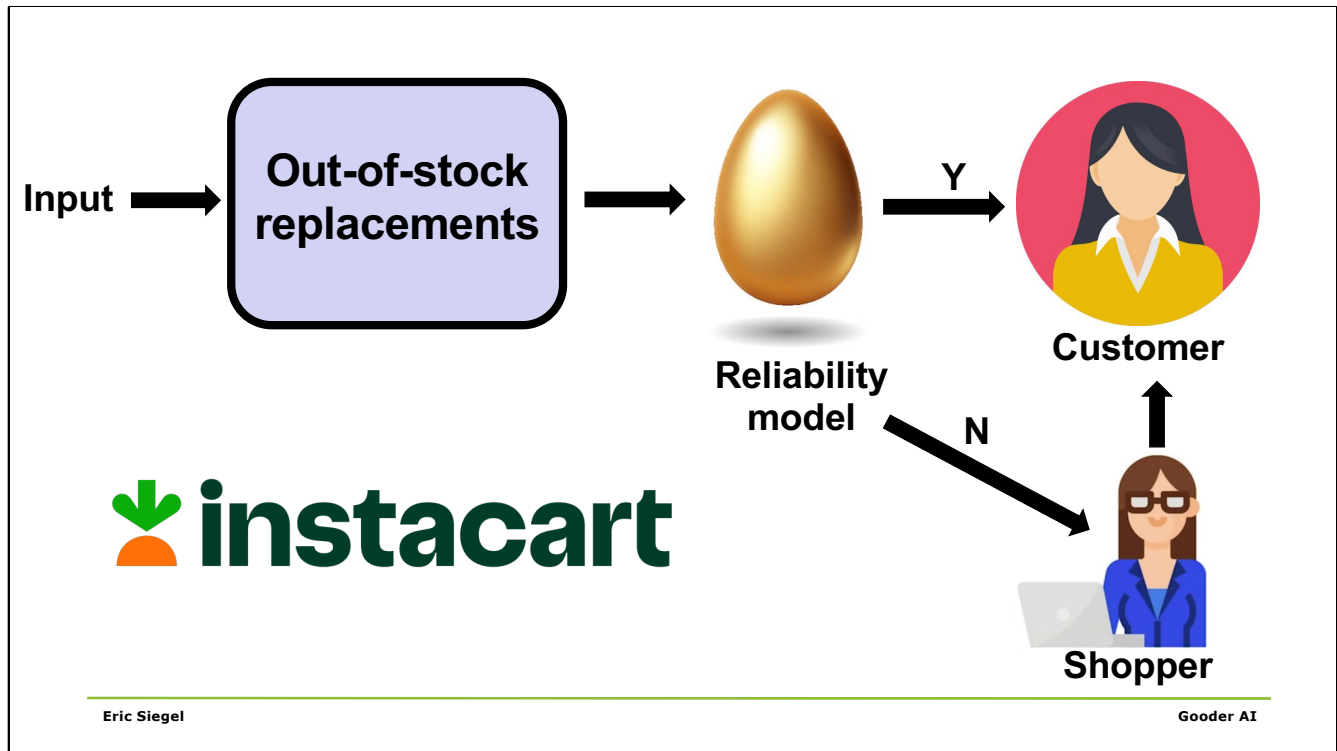
<https://www.wired.com/sponsored/story/how-twilio-uses-its-own-ai-builder-to-transform-customer-conversations/>

<https://machinelearningweek.com/session/how-twilio-uses-its-own-ai-builder-to-transform-customer-conversations/>

<https://www.forbes.com/sites/ericsiegel/2025/10/20/our-last-hope-before-the-ai-bubble-detonates-taming-llms/>



<https://machinelearningweek.com/session/from-medical-codes-to-cash-and-coverage-risk-filtered-insurance-claims-automation/>



<https://www.forbes.com/sites/ericsiegel/2026/09/01/at-instacart-hybrid-ai-solves-the-stubborn-ai-reliability-problem/>

<https://www.predictiveanalyticsworld.com/machinelearningtimes/how-instacart-uses-machine-learning-to-suggest-replacements-for-out-of-stock-products/14118/>

Generative AI

+

Predictive AI



HYBRID AI

Eric Siegel

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The Forbes logo, featuring the word "Forbes" in a white serif font on a dark rectangular background.

Related articles by Eric Siegel (see below for links)

[How Predictive AI Will Solve GenAI's Deadly Reliability Problem](#)

[5 Ways To Hybridize Predictive AI And Generative AI](#)

[Our Last Hope Before The AI Bubble Detonates: Taming LLMs](#)

[Hybrid AI: Industry Event Signals Emerging Hot Trend](#)

[Predictive AI Thrives, Despite GenAI Stealing The Spotlight](#)

[For Managing Business Uncertainty, Predictive AI Eclipses GenAI](#)

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<https://www.forbes.com/sites/ericsiegel/2025/03/24/how-predictive-ai-will-solve-genais-deadly-reliability-problem/>

<https://www.forbes.com/sites/ericsiegel/2025/05/15/5-ways-to-hybridize-predictive-ai-and-generative-ai/>

<https://www.forbes.com/sites/ericsiegel/2025/10/20/our-last-hope-before-the-ai-bubble-detonates-taming-llms/>

<https://www.forbes.com/sites/ericsiegel/2026/02/09/hybrid-ai-industry-event-signals-emerging-hot-trend/>

<https://www.forbes.com/sites/ericsiegel/2026/02/11/predictive-ai-thrives-despite-genai-stealing-the-spotlight/>

<https://www.forbes.com/sites/ericsiegel/2025/11/11/for-managing-business-uncertainty-predictive-ai-eclipses-genai/>

Conclusion: Getting to the Second Wow



Technical capability

Deployed value

Eric Siegel

Gooder AI

It's high time that enterprises begin to achieve the AI value everyone talks about but few realize. The world needs it to be so – not only to improve AI so that it gets closer to realizing the promises on which so many have placed tremendous bets, but also because value is the whole point... efficiency improves the world's prosperity.

GenAI's popularity promises to actually bolster predictive AI's longevity more than threaten it—because genAI projects need predictive AI. Crucially, predictive AI addresses genAI's stubborn reliability challenge: GenAI hallucinates and exhibits other unacceptable behaviors that preclude its deployment. This is particularly so for its more ambitious intended uses, such as **assuming the role of customer service agent, analyst, educator, or virtual assistant**. For genAI to realize a meaningful portion of its bold—often audacious—promise of autonomy, its reliability must improve. Predictive AI can help. It acts as a reliability layer that tames large language models by monitoring their behavior and targeting human attention toward situations most likely to go wrong. I am witnessing the emergence of this kind of hybrid approach: Enterprises are increasingly adopting it and I believe it represents the next killer app for predictive AI. **Once it becomes common practice, most genAI projects will also employ predictive AI.**

Conclusion: Partial Autonomy for Agents

- **Bad News:** We must compromise on full autonomy
- **Good News:** But we can realize a great deal of autonomy
- ***New news:*** *This is predictive AI's new killer app*

Eric Siegel

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Conclusion: Predictive AI vs. GenAI

Most companies should invest at least as much in predictive AI as in genAI.

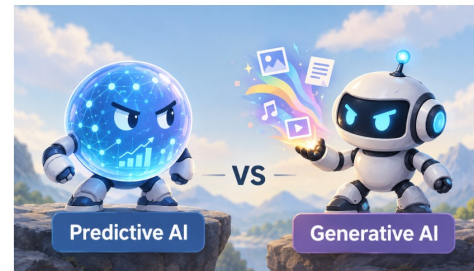


Eric Siegel

Gooder AI

GenAI Owns the Hype, but Predictive AI Is Thriving

By: Eric Siegel, Machine Learning Week



An epic battle has erupted between AI glitz and AI value. Theatricality is challenging utility. It's chic versus geek.

What started it? In the less than three years since I presented [the bizML playbook](#) for running predictive AI projects, a newer kind of AI has taken the world by storm: generative AI, or genAI. It commands center stage in an AI craze that has absolutely exploded in this short time. GenAI offers new capabilities and value, and man is it sexy as hell.

Of course, [the sheer usefulness of predictive AI](#) holds a seductive appeal of its own—but is that enough for it to survive? Will its proven serviceability and great untapped potential keep it afloat even as tides turn? Or will genAI's fashionability crush predictive AI, relegating it to obscurity and extinguishing most of its value across sectors?

Machine Learning Times version:

<https://www.predictiveanalyticsworld.com/machinelearningtimes/genai-owns-the-hype-but-predictive-ai-is-thriving/38921/>

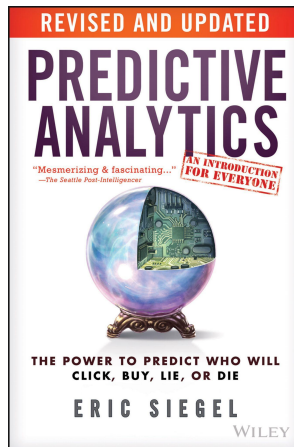
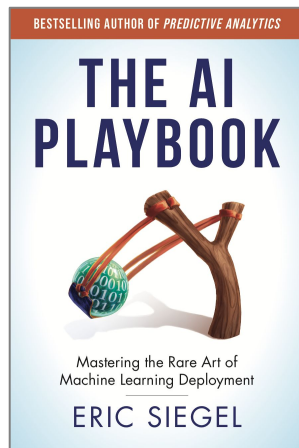
Same article in CDO Magazine:

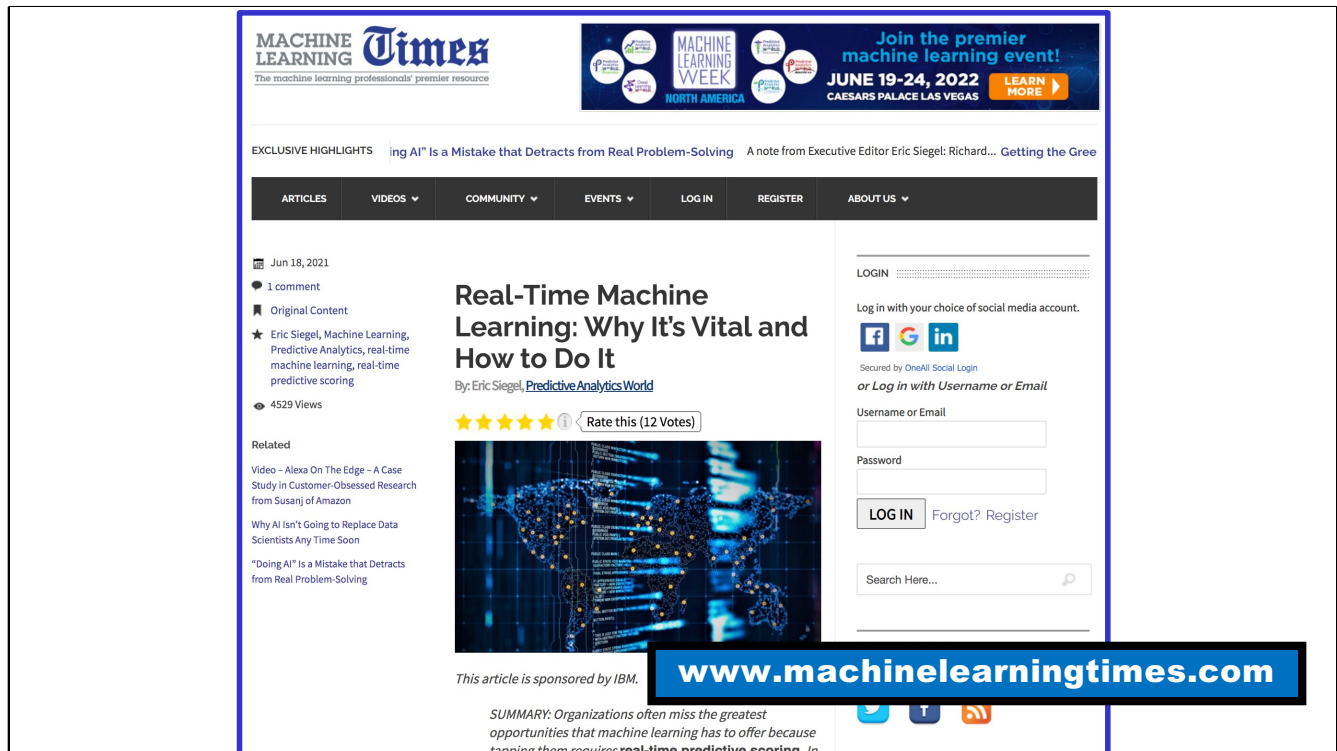
<https://www.predictiveanalyticsworld.com/machinelearningtimes/genai-owns-the-hype-but-predictive-ai-is-thriving/38921/>

Related article in Forbes: <https://www.forbes.com/sites/ericsiegel/2026/09/22/dont-let-genais-glitz-distract-from-predictive-ais-low-hanging-fruit/>



More content from Eric Siegel





The Machine Learning Times has become the destination for the constantly evolving machine learning community.

<http://www.machinelearningtimes.com>

This site is the machine learning professionals' premier resource, delivering timely, relevant industry-leading content: articles, videos, events, white papers, and community. The only full-scale content portal devoted exclusively to predictive analytics and its commercial deployment, the Predictive Analytics Times has become a standard must-read.

For the article shown above, see:

<https://www.predictiveanalyticsworld.com/machinelearningtimes/real-time-machine-learning-why-its-vital-and-how-to-do-it/12166/>