

# The AI Playbook

## Mastering the Rare Art of Machine Learning Deployment

By Eric Siegel

### Notes for CHAPTER 1

These notes include references, plus resources for further learning. For all the chapters' notes as well as information about the book in general, access the book's website at [www.bizML.com](http://www.bizML.com).

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"Leaders often believe that they need to be in mobile, analytics, AI, or other emerging technologies without being able to clearly articulate why they need to invest in these technologies or what business purpose they could serve... be sure that you know why you are beginning an initiative and what your business goals are for it."

–Gerald Kane et al., "The Technology Fallacy: How People Are the Real Key to Digital Transformation"

Seven Reasons You Need Predictive Analytics Today

<https://www.predictiveanalyticsworld.com/machinelearningtimes/seven-reasons-you-need-predictive-analytics-today/6730/>

Advertising as the lifeblood of the Internet, by Jodie Naze

<https://www.computerworld.com/article/2810679/advertising-as-the-lifeblood-of-the-internet.amp.html>

Quotation from Mihnea Moldoveanu:

Why AI Underperforms and What Companies Can Do About It:

<https://hbr.org/2019/03/why-ai-underperforms-and-what-companies-can-do-about-it>

Quotation from Will Grannis:

<https://www.linkedin.com/pulse/what-ai-first-really-requires-will-grannis/>

Quotation from Steven Pressfield:

Nobody Wants to Read Your Sh\*t: Why That Is And What You Can Do About It

<https://www.amazon.com/Nobody-Wants-Read-Your-Sh-ebook/dp/B01GZ1TJBI>

Richard Heimann's review of the book "The AI-First Company"

<https://www.predictiveanalyticsworld.com/machinelearningtimes/book-review-ai-cant-come-first/12424/>

MIT Technology Review interview with Andrew Ng

<https://www.technologyreview.com/2021/03/26/1021258/ai-pioneer-andrew-ng-machine-learning-business/>

Francesco Pochetti's tweet

[https://twitter.com/fra\\_pochetti/status/1502708228173578240?s=21](https://twitter.com/fra_pochetti/status/1502708228173578240?s=21)

Then another data scientist posted a screenshot of the above tweet on LinkedIn and got 1,600+ likes.

[https://www.linkedin.com/posts/abdalimran\\_ml-data-business-activity-6909800209455738880-WBly/](https://www.linkedin.com/posts/abdalimran_ml-data-business-activity-6909800209455738880-WBly/)

More example ML applications:

Five Ways Your Safety Depends on Machine Learning

<https://www.youtube.com/watch?v=1wJ6D7HpJnE&t>

Five Reasons Computers Predict When You'll Die

[https://www.youtube.com/watch?v=\\_4q7FrPWqF8&t](https://www.youtube.com/watch?v=_4q7FrPWqF8&t)

Retaining new customers, a killer app similar to churn modeling

<https://www.predictiveanalyticsworld.com/customer-retention/>

How to Choose Which Data Projects to Work On

[towardsdatascience.com/how-to-choose-which-data-projects-to-work-on-c6b8310ac04e](https://towardsdatascience.com/how-to-choose-which-data-projects-to-work-on-c6b8310ac04e)

“Highly ambitious moon shots are less likely to be successful than ‘low-hanging fruit’ projects that enhance business processes.”

Artificial Intelligence for the Real World

<https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>

Notes from the AI frontier: Insights from hundreds of use cases

McKinsey Global Institute

<https://www.mckinsey.com/~media/mckinsey/featured%20insights/artificial%20intelligence/notes%20from%20the%20ai%20frontier%20applications%20and%20value%20of%20deep%20learning/notes-from-the-ai-frontier-insights-from-hundreds-of-use-cases-discussion-paper.ashx>

“Love the Problem, Not the Solution.”

<https://blog.leanstack.com/love-the-problem-not-your-solution/>

The Road to Optimization - UPS's Analytics Success Story (webinar with Jack Levis)

<https://www.brighttalk.com/webcast/14379/306419>

ORION as the world's largest operations research project

[https://www.linkedin.com/pulse/orion-worlds-largest-project-sreekar-annaluru/?trk=articles\\_directory](https://www.linkedin.com/pulse/orion-worlds-largest-project-sreekar-annaluru/?trk=articles_directory)

<https://www.informit.com/articles/article.aspx?p=2992600&seqNum=6>

Predicting no-show medical patients

<https://scholar.smu.edu/datasciencereview/vol2/iss1/2/>

<https://www.predictiveanalyticsworld.com/machinelearningtimes/wise-practitioner-predictive-analytics-interview-series-chip-hart-physicians-computer-company-and-karl-rexer-rexer-analytics/10297/>

Healthcare apps

<https://www.digitalhealth.net/2022/02/looking-into-the-use-of-artificial-intelligence-in-healthcare/>

Online troll detection

<https://safety.twitch.tv/s/safety-news/detail>

Construction project outcome prediction

<https://www.prnewswire.com/news-releases/construction-industry-looking-to-predictive-analytics-to-improve-project-outcomes-301409068.html>

Sewage leak detection

<https://www.bbc.com/news/science-environment-56351501>

Wildfire detection

<https://www.latimes.com/california/story/2021-03-19/sonoma-county-is-using-artificial-intelligence-to-help-detect-wildfires>

Sorting cucumbers

<https://www.engadget.com/2016-08-31-google-ai-helps-cucumber-farm.html#:~:text=Makoto%20Koike%20has%20built%20a.they're%20identified%20as%20cucumbers.>

Detecting scooters illegally on sidewalk

<https://venturebeat.com/2020/01/28/lime-uses-sensor-data-to-keep-scooters-off-sidewalks/>

Detecting retail checkout theft

<https://www.businessinsider.com/walmart-tracks-theft-with-computer-vision-1000-stores-2019-6>

Flash flood prediction

<https://www.oreilly.com/ideas/random-forests-to-save-human-lives>

More and more ML apps:

<https://opendatascience.com/5-unexpected-industries-utilizing-ai-and-ml/>

<https://spectrum.ieee.org/ai-ethics-machines-learn-good>

How machine learning works for social good

<https://www.kdnuggets.com/2020/11/machine-learning-social-good.html>

Predictive Analytics World for Climate Technology

<https://predictiveanalyticsworldclimate.com/>

“Begin with the decision in mind. Digital decisioning has a central and ongoing focus on automating decisions, particularly operational and ‘micro’ decisions.”

–James Taylor, CEO of Decision Management Solutions and author of Digital Decisioning

How Machine Learning Can Improve the Customer Experience

Eric Siegel, Harvard Business Review, March 24, 2023

<https://hbr.org/2023/03/how-machine-learning-can-improve-the-customer-experience>

Six ways to lower costs with predictive analytics

<https://www.the-digital-insurer.com/wp-content/uploads/2013/12/85-Six-Ways-to-Lower-Costs-with-Predictive-Analytics.pdf>

How Machine Learning Works for Social Good

<https://www.kdnuggets.com/2020/11/machine-learning-social-good.html>

McKinsey on applying AI for social good

<https://www.mckinsey.com/featured-insights/artificial-intelligence/applying-artificial-intelligence-for-social-good>

More social good applications: ML saves the elephants, sharks, frogs, sea birds and everything else

<https://www.datasciencecentral.com/ai-saves-the-elephants-sharks-frogs-sea-birds-and-everything-else/>

10 wonderful social good applications

<https://www.forbes.com/sites/bernardmarr/2020/06/22/10-wonderful-examples-of-using-artificial-intelligence-ai-for-good/>

MORE ON ML FOR SOCIAL GOOD:

<https://www.wbez.org/shows/all-things-considered/can-big-data-help-head-off-police-misconduct/eadc6dea-50bb-4295-8d03-b55b75e443a2>

<https://www.mckinsey.com/featured-insights/artificial-intelligence/applying-artificial-intelligence-for-social-good>

<https://itif.org/events/2014/09/10/data-social-justice-impact-data-underserved-communities>

<http://www.kdnuggets.com/2014/11/drivendata-data-science-competitions-social-good.html>

ML AGAINST CHILD MALTREATMENT:

<https://www.unicef-irc.org/publications/1273-predictive-analytics-for-children-an-assessment-of-ethical-considerations-risks-and-benefits.html>

[http://www.huffingtonpost.com/daniel-heimpel/preventive-analytics\\_b\\_6077042.html](http://www.huffingtonpost.com/daniel-heimpel/preventive-analytics_b_6077042.html)

[http://www.sas.com/en\\_us/news/press-releases/2014/july/predictive-analytics-government.html](http://www.sas.com/en_us/news/press-releases/2014/july/predictive-analytics-government.html)

<https://chronicleofsocialchange.org/news-2/pennsylvania-county-leads-globe-uses-big-data-stem-child-abuse-not-without-probing-ethics-first/18290>

<https://chronicleofsocialchange.org/featured/uncharted-waters-data-analytics-and-child-protection-in-los-angeles/10867>