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Everyday AI
for Organizations and Individuals

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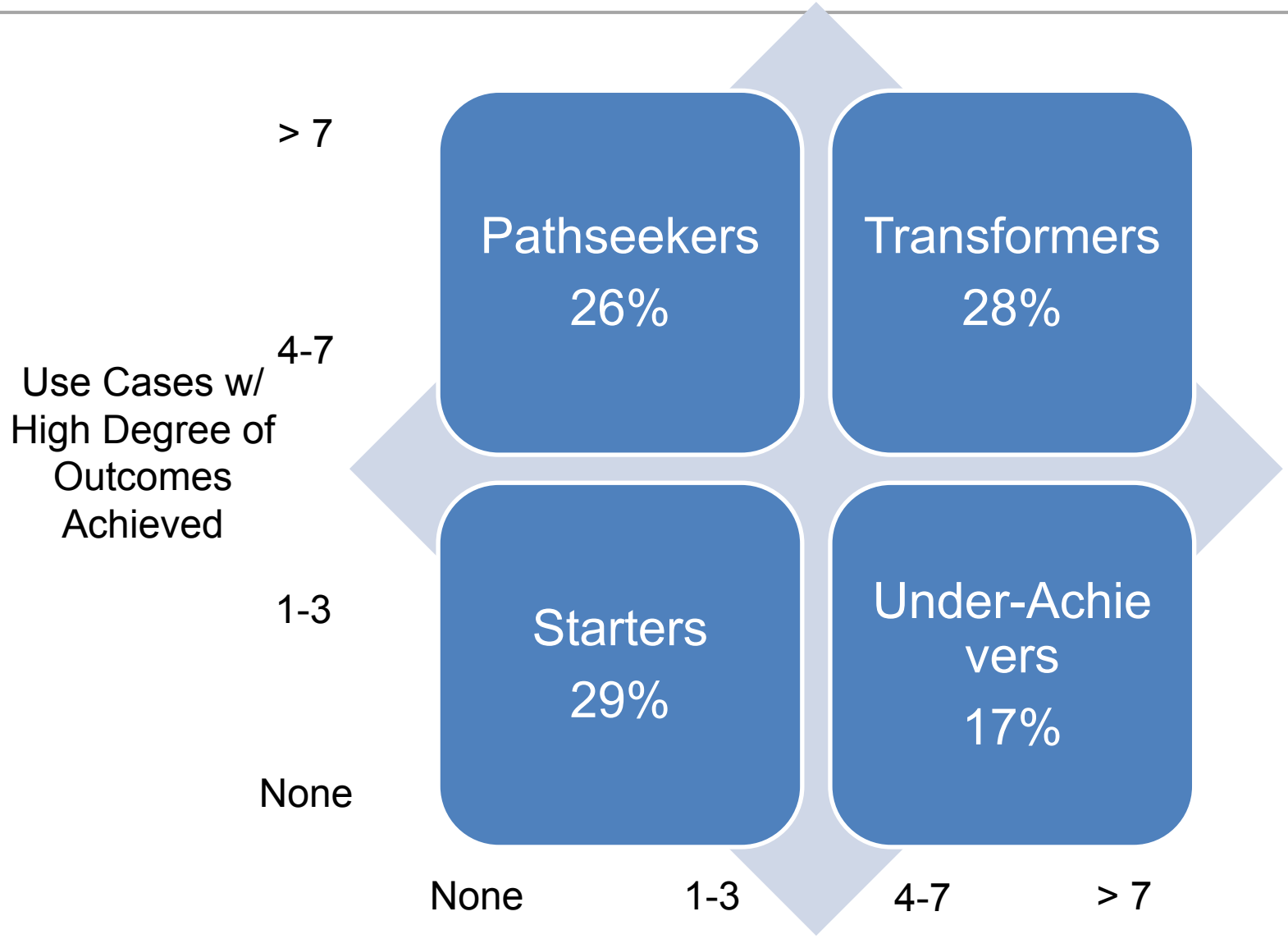
AI in the Enterprise in Late 2022

- About 50% are “AI-aware” globally and actively employing multiple technologies
- A few are “all in on AI,” most less aggressive
- Some challenges getting systems into production
- Diverse objectives beyond automation, but 63% will automate “as many jobs as possible”
- Less ambitious ”low hanging fruit” projects often more successful than ”moon shots”
- More experienced, the more bullish on AI
- Increased focus on automation technologies in the pandemic

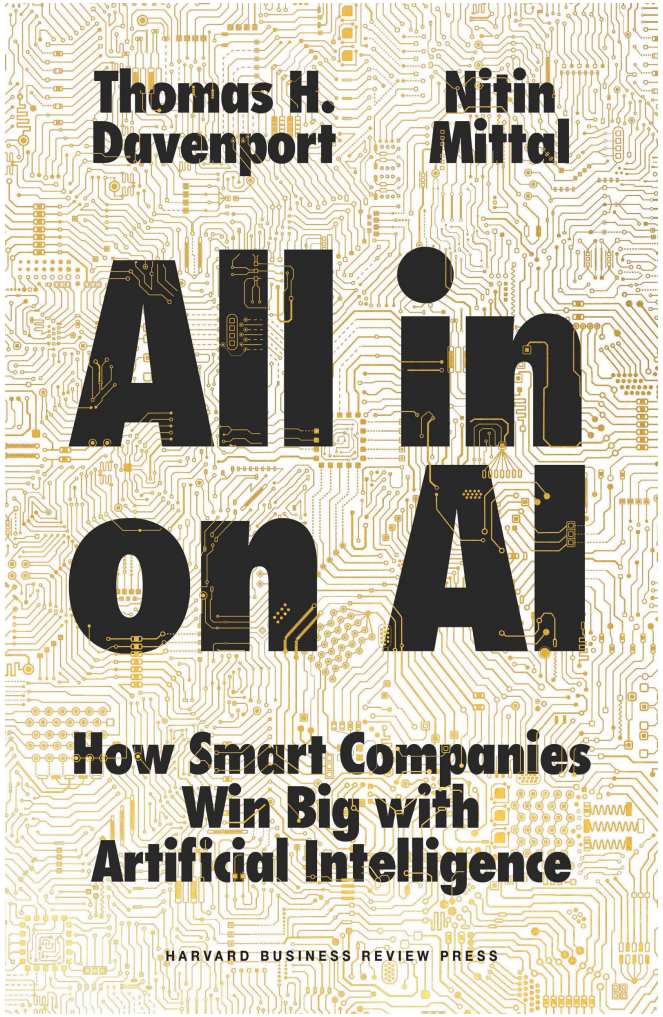
How Aggressively Are Companies Embracing AI?



Source: Deloitte 2022 “State of Enterprise AI” Survey

Off the Charts: All-In on AI (AKA “AI First”)

- AI across the company—many use cases, multiple technologies
- Tens, hundreds, thousands of systems in production deployment
- Use AI to reimagine and improve work processes
- Many employees fluent in AI and how it can be applied
- Voluminous, high quality, and unique data
- Long-term commitment, large investments
- A framework for ethical, trustworthy AI in place
- Well-defined governance structure and substantial talent



All-In at Airbus

- "AI is much more than a research field: it is a ubiquitous future technology with the potential to redefine all areas of our society. At Airbus, we believe AI is a key competitive advantage that enables us to capitalize on the value of our data."
- Skywise ecosystem in commercial airlines, with Palantir data integration across 140 airlines and 9500 aircraft—part of overall digital transformation
  - Airbus developing AI-based services including predictive maintenance, health monitoring, reliability analysis, global tracking
- Even earlier use of AI in Defense and Space business, including extensive image recognition in OneAtlas satellite imagery, autonomous takeoff and landing, vision-based helicopter navigation

All-In at Capital One

- ”Information-based strategy” since birth
- Over 1000 AI applications, mostly machine learning
- Moved all data to the cloud, making broad machine learning easier
- Focus not only on credit decisioning but all aspects of customer interaction and operations
- Not trying to replace humans—”just reduce friction”
- Eno—intelligent personal assistant for customer transactions and early fraud warning
- Center for Machine Learning has several hundred data scientists
- Heavy investment in ML infrastructure and training

All-In at Ping An

- China's largest private-sector company with "ecosystems" in insurance, banking, health care, autos, smart cities
- AI-driven industry platforms for:
  - Adjudicating collision damage claims
  - Assessing credit risk with facial recognition
  - Remote diagnosis of medical problems for over 300 million patients
  - Targeting and personalizing auto services
- Client relationship and social network management for sales all automated
- Employs over 24,000 software engineers, 800 data scientists, and 180 AI specialists
- Several venture capital and PE funds focusing on AI and other technologies

A Broad AI Approach Leads to Value

STRATEGY	Organizations with **enterprise-wide strategy and leadership** are **2X** more likely to achieve outcomes
OPERATIONS	**New AI processes** like MLOps **double** the likelihood of achieving goals
CULTURE & CHANGE	High investment in **change management** increases likelihood of exceeding expectations by **60%**
ORGANIZATION	Organizations with **more diverse ecosystems** are **40%** more likely to drive innovation with AI

Source: 2022 Deloitte Survey of Enterprise AI

Alternative AI Objectives in All-In Companies

Creation: Business Models, Products, Services

Operational Transformation

New Customer Behaviors

Examples from Research—All-In Companies, Alternative AI Objectives

Creation: Business Models, Products, Services

- Ping An
- Loblaw
- Airbus
- SOMPO

Operational Transformation

- Scotiabank
- Mastercard
- Big River Steel
- Shell
- Unilever
- DBS Bank
- Kroger

New Customer Behaviors

- Anthem
- Manulife
- Well

Houston, We Have a Deployment Problem

- Seven out of ten companies report minimal or no impact from AI thus far (2019 MIT SMR/BCG survey)
- Only 15% of respondents report any production deployment of AI (2020 NewVantage Partners survey)
- 87% of data science projects are never deployed (2019 VentureBeat AI)
- Only 21% of respondents have embedded AI into multiple business units or functions (McKinsey 2022 survey)
- "The reality is that most organizations struggle to scale the AI pilots into enterprise wide production, which limits the ability to realize AI's potential business value." (Gartner 2022 CIO Agenda survey)
- Recent surveys note some progress, but a continuing issue with deployment

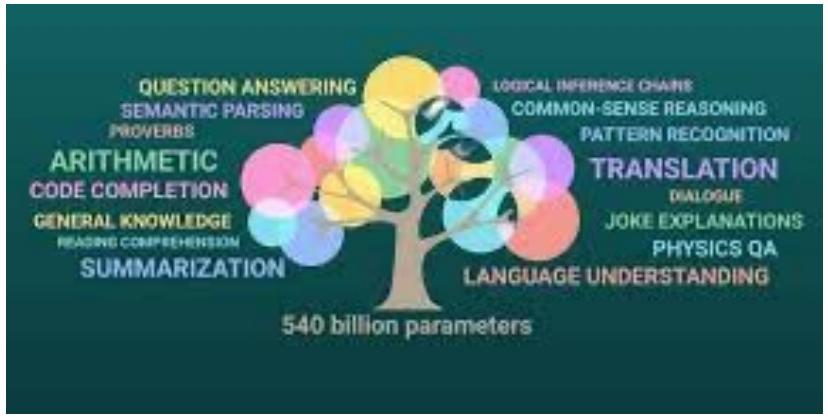
Mission Control in Houston, Apollo 13

Where Is Enterprise AI Going?

Smaller data + bigger data

Professionals + amateurs

Augmentation + digital workers

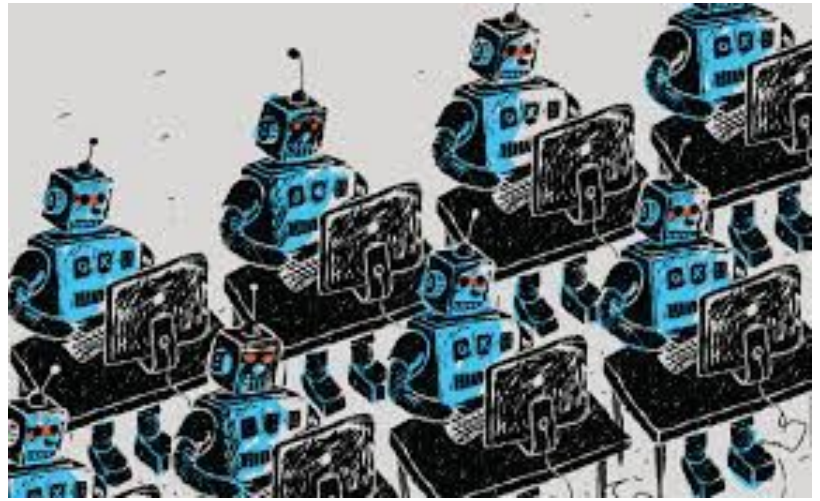


General AI + narrow AI

Logic + semantics + statistics

Early Predictions on the Impact of AI on Individual Workers

- "The development of full artificial intelligence could spell the end of the human race." (Stephen Hawking)
- "Advancing machine intelligence is the most important problem facing the world today." (Nobel economist Robert Schiller)
- "We will soon be looking at hordes of citizens of zero economic value." (Michael Malone, Bill Davidow)
- "AI will replace half of all jobs in the next decade" [2017-2027] (Kai-Fu Lee)
- "47% of US jobs are automatable by 2033" (Oxford Martin Institute)
- "AI will lead to 75,000,000 job losses by 2022, but 133,000,000 new jobs will be created." (World Economic Forum)



Tasks Are Not Jobs

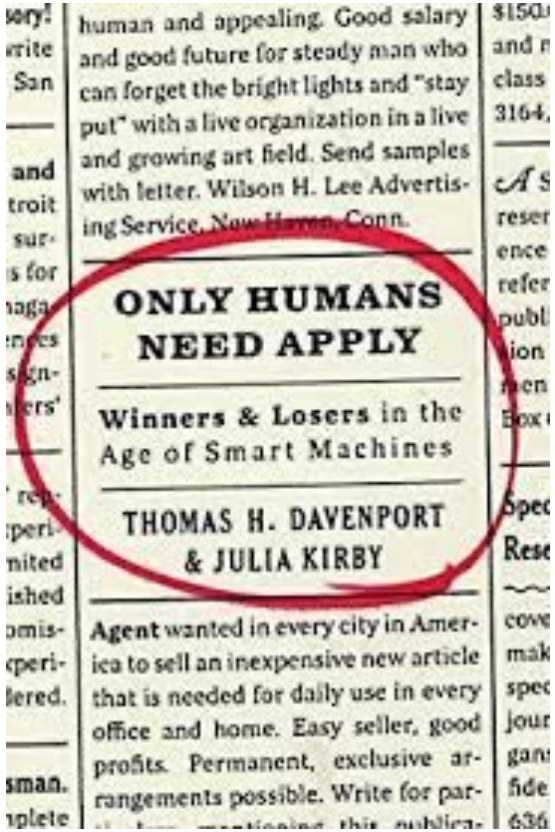
- Many knowledge work job *tasks* are at risk of being automated
- Some knowledge workers will lose their jobs, but it will be on the margins
  - We'll need 8 lawyers instead of 10
- Job loss will happen slowly, e.g., bank tellers
- There are going to be a lot (no one knows how many) of jobs working alongside smart machines
- We'll have plenty of productivity gains, so we can afford to retrain and redeploy people if we want to
- But there is no room for complacency—digital workers are here!

What Is Augmentation?

- Augmentation—smart humans helping smart machines, and vice-versa
- People do this by aiding automated systems that are better than humans at their particular tasks, or by focusing those tasks at which humans are still better
- Sometimes it's machines 80%, humans 20%, and sometimes the reverse
- Most organizations adopting AI are currently pursuing augmentation, but they may have plans for automation—more post-pandemic

Five Ways of Stepping Into Augmentation

- *Step in—humans master the details of the system, know its strengths and weaknesses, and when it needs to be modified—by far most common*
- *Step up*—humans take a big-picture view of computer-driven tasks and decide whether to automate new domains
- *Step aside*—humans focus on areas they do better than computers, at least for now
- *Step narrowly*—humans focus on knowledge domains that are too narrow to be worth automating
- *Step forward*—humans build new AI-based systems


human and appealing. Good salary and good future for steady man who can forget the bright lights and "stay put" with a live organization in a live and growing art field. Send samples with letter. Wilson H. Lee Advertising Service, New Haven, Conn.

ONLY HUMANS NEED APPLY

Winners & Losers in the Age of Smart Machines

THOMAS H. DAVENPORT & JULIA KIRBY

Agent wanted in every city in America to sell an inexpensive new article that is needed for daily use in every office and home. Easy seller, good profits. Permanent, exclusive arrangements possible. Write for par-

Financial Advisors Step In at Morgan Stanley

- "Next best offer" system for wealth management customers; from 45 minutes to one second for an idea
- Identifies investing opportunities for clients based on machine learning; FAs decide whether to send them
- The average FA has 200 clients; the key to success is engaging with them at scale
- Communications platform as valuable as recommendations
- Jeff McMillan, CAO (steps forward): "We have a very sophisticated machine learning algorithm to identify topics of interest to clients. But in the end financial advising is a human-based game. If all the system does is remind them that the advisor is there and looking out for them, that is often enough."

Translators Step In/Up/Forward

- Lilt CAT system uses AI to enable faster and more accurate business-critical translation and localization
- Erica Storm, a Dane living in New Zealand, translates for Lilt and specializes in marketing-oriented translations to and from Danish—she "steps in"
- Storm has worked with a variety of CAT systems but most are "too stupid"
- Alessandra Binazzi, the head of Global Localization at Asics Digital, steps up to decide what AI capabilities her company needs for localization
- Data scientists at Lilt step forward to train and improve models for each customer and translator

Digital Life Underwriters Step In at Haven Life

- Haven Life, a unit of Mass Mutual, offers fast, easy digital underwriting of term life insurance
- New digital platform for underwriting using rule engine and machine learning
- Half of applications need no human review; over 20% need no medical exam
- Kristen Buonopane, an underwriter, sees only a few flagged risk issues out of 100 data points—the tough, fulfilling decisions like nausea drug usage in women
- Buonopane: "I think complex cases will always require a human review. Human underwriters can take a holistic perspective that a machine can't."

Medical Coders Step In at Optum

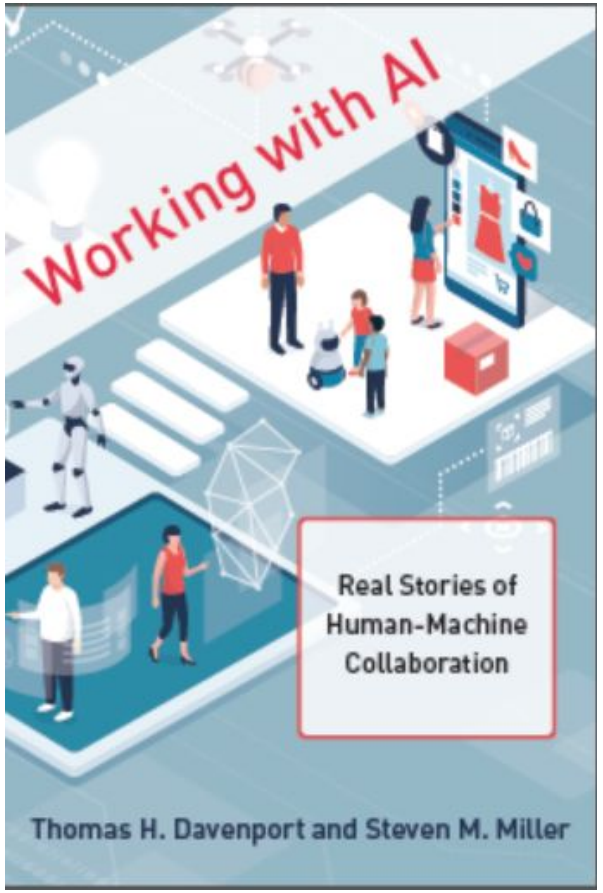
- Medical coding is very complex, with 14,000 ICD-10 codes and 55,000 coming in ICD-11
- Very time-consuming to identify and look up right code manually
- AI system at Optum suggests codes for a case, and human coder audits/checks it
- Definite improvement in productivity, “but the system can make you lazy.”
- Hospitals and coding services want experienced coders
- Coder: “Sometimes I’m amazed at how accurate the system’s coding is. But sometimes it makes no sense.”
- Lots of complexity, so “coding will never be fully automated.”

Transaction Surveillance Steps Up/In at DBS Bank

- DBS--largest bank in Singapore and SE Asia—has long used rule-based system to fight money laundering, fraud
- Rules identify 98% false positives--human review necessary
- Added machine learning to prioritize positive cases
- Also network link analytics system and workflow platform
- Now a third more productive; use 80% of bank data vs. 5-10%; faster ID of “bad actors”
- Lowest probability cases put in “freezer” for 90 days
- Head of Surveillance (steps up): “AI methods augment the ability of our analysts to take the right decisions, not to fully automate the process. It’s really augmented intelligence, not artificial intelligence….there will always be a subjective element to evaluations of what is and isn’t suspicious.”

Common Implications of Working with AI

- It takes a village to make augmentation happen
- Work gets harder, not easier, for humans
- AI prioritizes important tasks, assembles the information, and makes provisional decisions
- Less (mostly) opportunity for entry-level workers
- Multiple types of AI are often involved
- You need a workflow platform as well as AI
- Virtually all these augmented workers work virtually
- Need opportunities for social interaction



What Businesses Should Do About AI

- Think big, start small
- Go all-in if your leaders are on board
- Use AI to do something new
- Take an augmentation perspective from the beginning
- Design work for the combination of smart humans and smart machines
- Give people some job options and the time and resources to upskill
- Put someone in charge of thinking about the human and digital workforce