Navigating New Frontiers

Smart Strategies for AI & Automation in Accounting

54TH ANNUAL
VIRGINIA ACCOUNTING and AUDITING CONFERENCE

VSCPA
Virginia Society of CPAs

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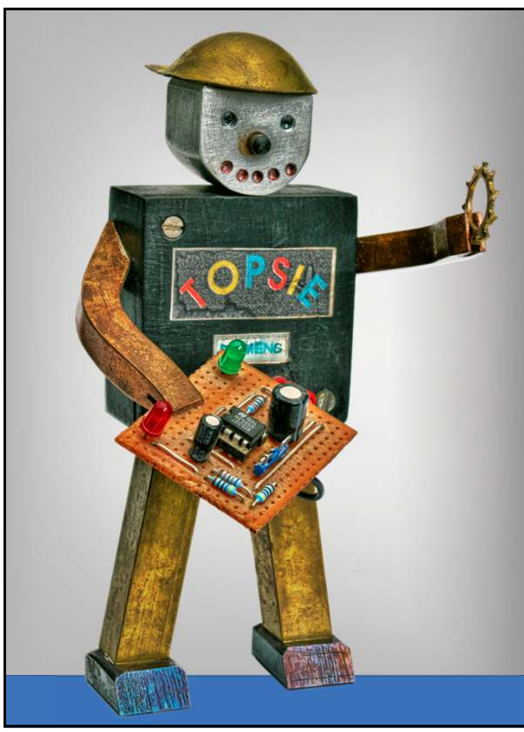

At LakeTurn Automation, we build custom AI-powered software robots that automate time-consuming, repetitive tasks within organizations. These automations result in increased productivity, improved accuracy, decreased costs, reduced operational risk, and, most importantly, empowered employees who provide improved customer experiences.

Visit us at www.LakeTurnAutomation.ai

TOPICS

- WHY AUTOMATE?
- INTELLIGENT AUTOMATION (IA) OVERVIEW
- ROBOTIC PROCESS AUTOMATION (RPA)
- WHAT IS ARTIFICIAL INTELLIGENCE (AI)?
- WHERE IS AI TODAY / TOMORROW?
- FOUNDATION FOR THE FUTURE (STRATEGY)
- WHERE TO START (EXECUTION)
- WRAP UP / Q&A

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Why Automate?

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INTELLIGENT AUTOMATION

AUTOMATION

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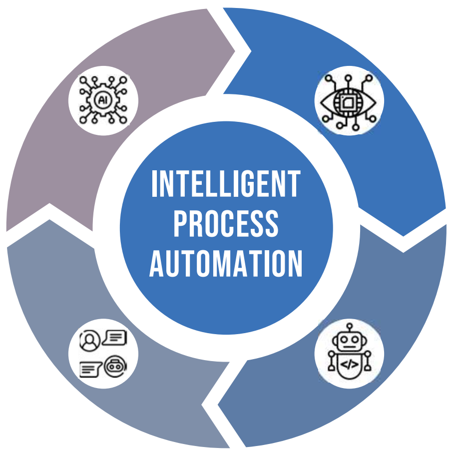
What is Intelligent Process Automation (IA)?

Intelligent Process Automation (IPA) combines **Robotic Process Automation (RPA)** with **Artificial Intelligence (AI)** and other technologies to create workflows that don't just function automatically, but also think, learn, and improve without human intervention.

AI & MACHINE LEARNING
Thinking & Learning
Generative AI (OpenAI, Google, Anthropic, Perplexity)
Machine Learning (DataRobot)

COMPUTER VISION
Vision
Optical Character Recognition (OCR)
Intelligent Document Processing (Intellidocs)
Multi-Modal AI -> Image and Video Analysis



NATURAL LANGUAGE PROCESSING
Language
Custom/Private Intelligent Chatbots (LangChain + OpenAi)
Sentiment Analysis
Speech Analytics

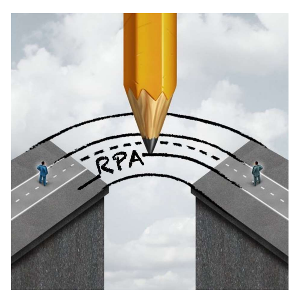
ROBOTICS & SMART WORKFLOWS
Execution
Robotic Process Automation (ElectroNeek, Ui-Path, Power Automate)
Low-Code Automation Platforms (Processio, IntegraBots)
Cloud Automation Platforms (Zapier, Make)

What is Robotic Process Automation?

- RPA is an automation technology that allows the elimination of repetitive manual tasks in a digital environment. To do so, it employs bots, software programs that operate at the system and User Interface (UI) level to mimic human employees' actions to perform various assignments.
- RPA bots can interact with a multitude of systems and technologies and do almost anything if their task is rule based.

  Some of their basic skills are as follows:

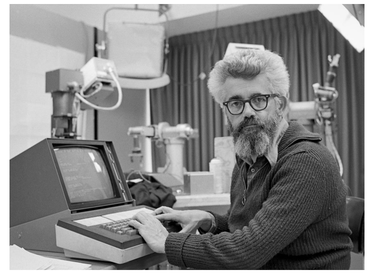
  - Manipulating files and folders
  - Launching and terminating apps
  - Extracting data from documents via OCR
  - Querying databases
  - Transferring data between systems
  - Making calculations
  - Typing and filling in forms
  - Sending emails and SMS
  - Enhanced Excel /Google Sheets features
  - Interacting with any website and/or cloud based application via the UI
  - Interacting with any Windows based application via the UI and at the system level
  - Interacting with the AS/400 via IBM Personal Communications 5250 emulator
  - Interact with VM's (Citrix, VMware, Hyper-V)
  - Extended automations via API's, webhooks chatbot platform integration and Zapier.
  - Advanced automations using JavaScript



What is Artificial Intelligence

Coined in 1955 by John McCarthy a Stanford Math Professor

- Confusing Term – What does "Artificial" mean? What is "Intelligence"?
- According to the Oxford Dictionary, **AI is** the theory and development of **computer systems that can perform tasks that normally require human intelligence,** such as visual perception, speech recognition, decision-making, and translation between languages.
- 3 Types (Narrow AI, AGI, ASI)



Main Domains of Artificial Intelligence

1. **Machine Learning:** Teaches computers to learn and improve from experience without explicit instructions.
2. **Natural Language Processing (NLP):** Enables computers to understand, interpret, and generate human language. LLMs included here.
3. **Robotics:** Empowers machines to perform tasks, interacting physically with their environment.
4. **Computer Vision:** Allows computers to interpret and understand visual information from the world.
5. **Expert Systems:** Provides specialized decision-making advice based on a vast knowledge base in specific domains.

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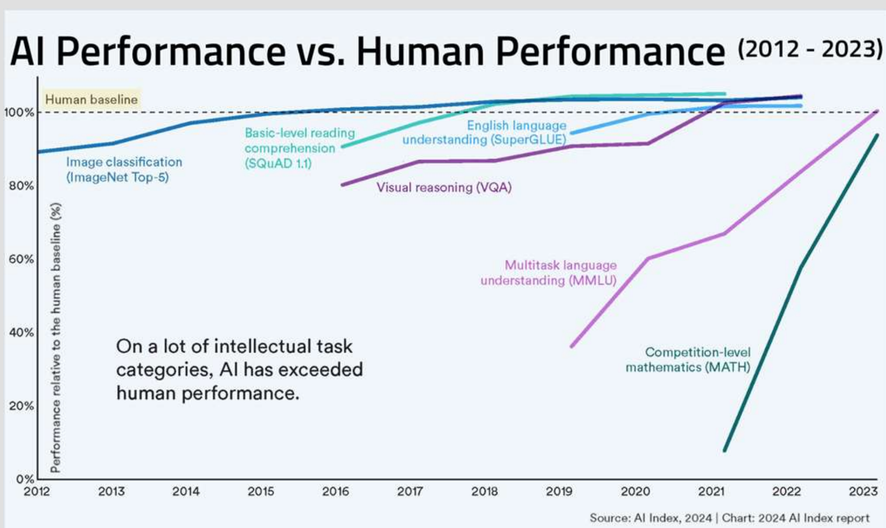
AI vs. Human Performance: The Stanford AI Index

Move over, human?
Annual Stanford AI Index for 2024
GPT-4 Baseline

Key Takeaways
1. Get Ready – It's here!
2. New Benchmarks Needed
3. Problem Solving / Math Gap
4. Ethics & Bias Concerns
5. Proactive Policy Needed

To Know and Do
1. Exponential Speed of Change
2. Prepare Your Organization
3. Prepare Your Team
4. Prepare Yourself
5. Embrace AI/Automation and create a supportive culture



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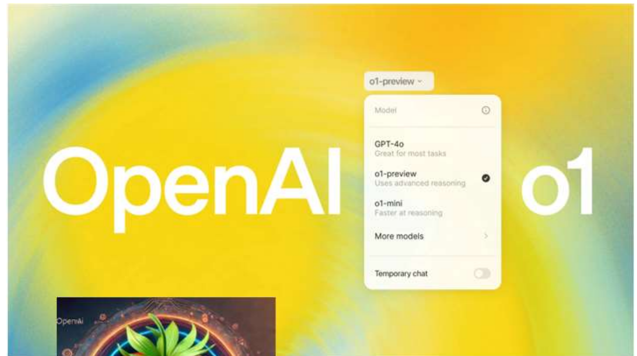
Closing the Math & Reasoning Gap - OpenAI o1

Per OpenAI :

"A new series of AI models designed to spend more time thinking before they respond. They can reason through complex tasks and solve harder problems than previous models in science, coding, and math.

Performance exceeds human PhD-level accuracy on a benchmark of physics, biology, and chemistry problems (GPQA). While the work needed to make this new model as easy to use as current models is still ongoing, we are releasing an early version of this model, OpenAI o1-preview, for immediate use in ChatGPT."



*** Limited to Text Input Only**
- Not multimodal (no vision)
- No document analysis

Math Sample Results - OpenAI o1

ChatGPT 3.5

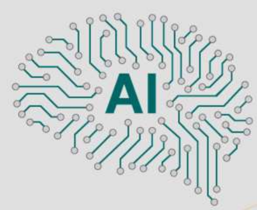
If it takes 1 hour for a single shirt to dry in the sun, how many hours will it take 5 shirts to dry?

GPT RESPONSE: 5 Hours

ChatGPT o1

The sum of the ages of Nicole and Kristin is 32. In two years, Nicole will be three times as old as Kristin. How old is Kristen now?

GPT RESPONSE: 7 Years Old



Accounting Sample Results - OpenAI o1

ChatGPT o1

At the beginning of the year, Smith Co. reported assets of $500,000 and liabilities of $375,000. During the year, they did not pay dividends, they had $83,000 in sales, and $65,000 in expenses. Smith Co. had an increase in total assets of $25,000 and their liabilities decreased by $3,000. What was the amount of common stock issued during the year?

GPT RESPONSE: $10,000

Jason Staats, CPA
on OpenAI o1
9/17/2024

"For the first time, I'd say we have an AI operating at staff-level capability on most of the accounting tasks I've thrown at it.

… I see immediate utility as a first-level accounting reviewer. It's calling out technical errors that are put onto seniors' desks every day by staff and junior bookkeepers.

… Hard to say today how this impacts workflows, but we're 1, maybe 2 model evolutions (6-9 months) from LLMs taking over the bulk of bookkeeping quality assurance."

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FOUNDATION FOR THE FUTURE

STRATEGY

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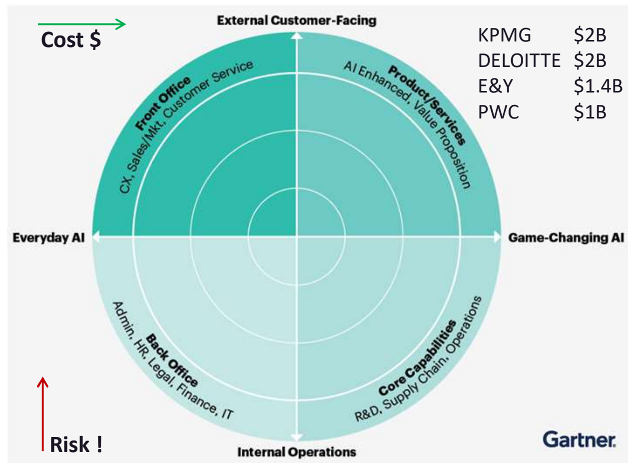
Organizational Imperatives for Preparing for AI

1. **Foundational Policies & Guidelines**
   - Gen AI use Policy
   - AI Legal & Ethics Guidelines
   - Bias & Discrimination Prevention
2. **Cultural Readiness**
   - Establish AI Literacy with ALL Employees
   - Make Leadership AI Ambassadors
   - Build / Train Cross-Functional Teams
3. **Skills Readiness**
   - Educate the Executive Team
   - Train and Upskill Key Employees (AI SMEs)
   - Technical Employee Retraining
   - Development for Replaced Tasks & Workers
4. **Data Readiness**
   - Capturing & Tagging
   - Storing & Security
   - Ensuring Cleanliness
5. **Getting Started – AI Jumpstart**
   - Identify AI Readiness Gaps
   - Find High-Impact AI & Automation Initiatives
   - Develop a Short-Term AI & Automation Strategy
   - Review Adjust & Iterate



Automation & AI Deployment – Best Practice

Automation / AI Maturity Model

Program Stages

Start here!

Return on Investment

	Prove (POC)	Establish	Expand	Scale
Executive Sponsor	Project Enthusiast	Business Champion	Transformation Executive	C-Suite / Executive Team
Investment Model	Process-Specific ROI / Hours Saved	Business Unit Outcomes	Strategic Benefits of Automation Pipeline	Business Transformation
Risk Mgmt. / Governance	Process Specific ROI & Change Management	Departmental KPI's Center of Expertise (CoE)	Area & Dept. KPI's CoE + Automation Strategy	Enterprise KPI's Business Strategy & Automation Alignment
Scope and Timeline	Targeted Processes 1-5 Automations 1-3 Months	Departmental 5-10 Automations 3-6 Months	Multi-Departmental 10-20 Automations 6-24 Months	Enterprise 20+ Automations 24+ Months

WHERE TO START?

EXECUTION

How to Get Started with Automation

- Conduct a quick first automation with RPA – a PoC Pilot.
  - Organization: low-risk proof that real benefits are attainable
  - Stakeholders: how IA works & visibility to benefits at scale
  - Employees: experience with bots and automation benefits
- What to look for when selecting a process for the PoC Pilot:
  - Low Risk and Complexity
  - Rules Based
  - Manual and Repetitive
  - Structured Data
  - Digitized Input
  - High Volume / Frequency
  - Mature & Stable Process
  - Measurable Effects

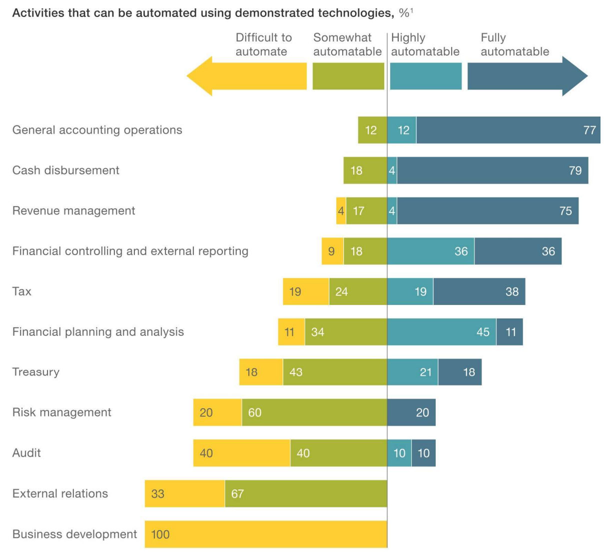
F&A Automation Potential

According to a study conducted by their Global Automation Research Institute, McKinsey & Company found that RPA and AI can fully automate 42 percent of finance activities and mostly automate a further 19 percent.

The chart at right shows automation opportunities by Finance & Accounting functional areas.

Transactional activities are the most automatable, but opportunities exist across most subfunctions.

> *"Automation is reshaping the future of work in the finance function, and the opportunity to boost performance will fuel the trend. Adapting to disruption is challenging, but CFOs who build a clear perspective on the nuances of the automation journey will be well positioned to thrive."*
>
> "Bots, algorithms, and the future of the finance function" – McKinsey & Company



F&A Process Automation Entry Points

Below is a list of processes in Finance and Accounting that are highly suited to RPA. While specific finance functions will vary by organization, this list highlights some of the typical use case scenarios by area for F&A automation.

Procure to Pay

- Purchase order entry and delivery
- Vendor verification and setup
- Vendor master-data management
- Vendor queries/helpdesk
- Invoice receipt and classification
- Invoice data extraction
- Invoice data entry and interface
- Two and three-way PO/invoice/receipt matching
- Non-PO invoice coding
- Employee expense statements
- Vendor statement reconciliation
- AP accrual journal entry
- Expense compliance audit
- Payment processing

Order to Cash

- Sales order entry
- Customer data setup
- Customer data management
- Billing/invoicing
- Collection activities (dunning)
- Cash application
- Credit risk management
- Dispute verification and resolution
- Chargeback management

General Accounting

- General ledger and subledger reconciliations
- Bank reconciliations
- Inter-company reconciliations
- Manual journal entries
- Reclassification journal entries
- Fixed asset accounting
- Inter-company settlements
- Financial close activities
- Cost Accounting

Tax, treasury and compliance

- Data aggregation for tax liability
- Convert data to tax bias
- Complete tax return workbooks
- Prepare tax returns
- File tax returns and payments
- Tax accounting entries

Public Accounting Targets

- Client Document Collection/Mgmt
- Client Deliverable Status Updates
- Schedule & Assign Client Work
- Client Communication Mgmt.
- Onboarding New Clients
- Timekeeping Compliance
- Tax Return Data Entry
- Connecting Disparate Systems
- Compliance & Back Office Work

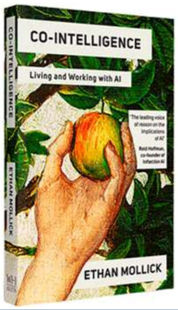
Financial planning, analysis and reporting

- Data aggregation for reports
- Report preparation and distribution (including below)
  - Trial balance and balance sheet
  - Profit and loss
  - Cashflow
  - Variance analysis
  - Management reports
  - Statutory/regulatory reports

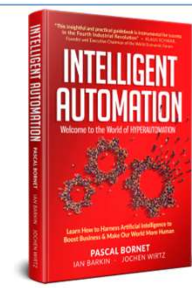
Data & Systems Integration

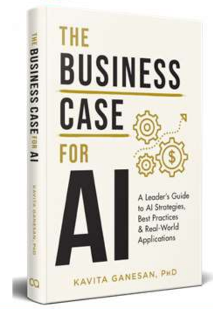
- Data conversion
- Data migration & entry
- Data updates
- Data validation
- Data cleansing
- Extracting data from .PDF's
- Synchronizing systems (ex. ERP and CRM)
- Updating scorecards

Wrap Up



- **Takeaways**
  1. **Leverage IA (RPA + AI) for Smarter Processes**
  2. **Prepare for Change (Policies, Culture & Skills)**
  3. **Embrace AI for Business Growth**
  4. **AI & Automation are Here: Plan *then* Execute**
  5. **Start small, but start now**
- **Great Reads & Resources!**
  - **The Fourth Age** by Byron Reese
  - **Intelligent Automation** by Pascal Bornet
  - **Co-Intelligence** by Ethan Mollick
  - **The Business Case for AI** by Kavita Ganesan
  - Follow **Jason Staats** and **Ethan Mollick**





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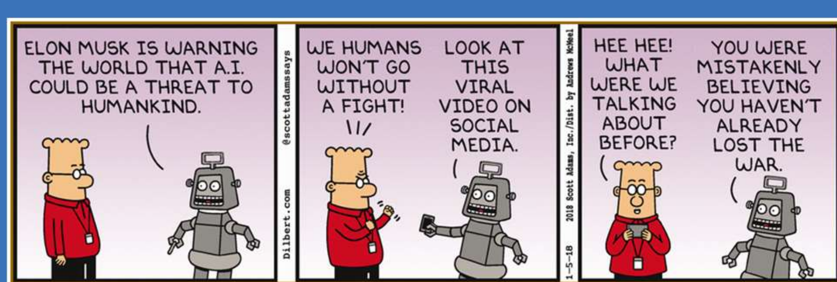
DISCUSSION / Q&A



LakeTurn Automation
Advancing Work with the Power of AI™

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