Atiba's AI Guide for Business Leaders

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Atiba AI Services read more

AI Readiness Assessment

Is your business ready for AI? Atiba's Readiness Assessment identifies where AI can increase efficiencies, help you remain competitive in the new landscape, and ultimately increase profits.

Custom AI Software Development

Atiba has developed over a thousand custom applications in dozens of programming languages. We're leveraging that experience to develop software for the age of AI.

Custom AI Chatbots

Custom chatbots tap your organization's institutional knowledge, resources, and experience to put answers a few keystrokes away.

Microsoft Copilot Studio Consulting

Atiba can help your organization by training Copilot on corporate data, creating guardrails for security and governance, risk, and compliance, and training staff on Copilot usage, security, and privacy.

AI Software Development Tools

Atiba is already using AI to save our clients money when developing software for them. We are also guiding organizations to take advantage of AI to increase ROI for their in-house development efforts.

Basic AI Concepts Explained in 1 Page

AI vs. Machine Learning and Deep Learning

Machine learning (ML) is a basic form of AI that uses algorithms and historical data to optimize outcomes and make predictions. For example, an e-commerce website can look at an item in your shopping cart and suggest other products purchased by people who have purchased the same item in the past.

Deep learning (DL) is a subset of AI that's much more sophisticated than machine learning. Amazon uses DL to calculate the most-efficient logistics solution when fulfilling millions of orders from more than 300 warehouses across the U.S.

ChatGPT-style Artificial Intelligence (AI) and Generative AI emulates human intelligence to evaluate and learn from data, make decisions and recommendations and output information in complex, human-like ways.

- ChatGPT and similar chatbots use a **Large Language Model (LLM)** that performs **Natural Language Processing (NLP)** to digest and store information, process inputs (**prompts**), and output information using everyday, conversational language instead of a programming language.

- There is an art to writing prompts (sometimes called **prompt engineering**), which sometimes have to be carefully phrased to get the best results.

- The prompt is broken up into **tokens**, which in most cases you can think of as individual words (they're closer to three-fourths of a word on average) or numbers. LLMs have limits on the number of tokens they can process. The more sophisticated systems can process more tokens.

- Popular, public LLMs are trained with large, unstructured datasets, such as millions of web pages or images. Private LLMs may be trained with just thousands of internal documents. **Multimodal LLMs** can process more than one type of data, such as text, images, voice, and video.

- ChatGPT can understand a prompt like "what fitness products are good for cardio and can fit under the bed?" and give relevant answers, because it has "read" about fitness products and understands how much space is under a bed.

- ChatGPT generates text responses from inputs. Other generative AI can take an input and generate images, video, audio, or other multimedia.

How Businesses are Using AI

Customer Service
Klarna replaced 700 customer service agents with a chatbot, saving $40 million per year. The chatbot resolves issues in an average of two minutes instead of 11. Source

Expert Advice
Morgan Stanley trained a ChatGPT-4 based AI on 100,000 research reports to give financial advisors quick access to the company's best information. Source

Website Bookings
Hilton Hotels uses IBM's Watson AI to generate personalized ads on its site. Website visitors are now 30% more likely to book a room. Source

Generative Training Videos
Cyber Inc. uses Synthesia AI to cut the time to create videos in half and translate them into multiple languages. Source

SEO
Tomorrow Sleep used MarketMuse to generate SEO content. Within a year their monthly search engine traffic increased from 4K to 400K. Source

Personalization
Netflix's AI personalizes TV and movie recommendations, increasing revenue $1 billion annually by improving retention. Source

Email Campaigns
FARFETCH uses Phrasee to generate on-brand content. Unleashing AI on their email campaigns increased open rates 31% and click rates 38%. Source

Competitive Intelligence
Mastercard Payment Gateway Services uses Crayon to gather intelligence about competitive threats coming their way. Source

Industries and Professions with the Most AI Exposure

"AI isn't going to replace you, but a person using AI will."
   - Amy B. Goldsmith

- [36% of people](#) expect AI will replace their job in the next five years.
- As per a [World Economic Forum report](#), by 2025, automation and AI will replace 85 million jobs while generating 97 million new jobs worldwide.
- Mckinsey [estimates](#) that while less than 5% of occupations can be entirely automated, 60% of all jobs can be automated by as much as 30%.

The Pew Research Center has an extensive 2023 report, [Which U.S. Workers Are More Exposed to AI on Their Jobs?](#), with their readout on AI's effect on the job market by profession. The charts below summarize their findings.

High AI Exposure Jobs Employing the Most Men and Women

MEN	# EMPLOYED
Sales representatives, wholesale, and manufacturing	825,000
Lawyers	731,000
Computer occupations, all other	720,000
Couriers and messengers	690,000
Accountants and auditors	682,000

WOMEN	# EMPLOYED
Secretaries and administrative assistants, except legal, medical, and executives	1,775,000
Office clerks, general	1,060,000
Receptionists, information clerks	1,059,000
Accounts and auditors	973,000
Bookkeeping, accounting, and auditing clerks	964,000

Top 3 Industries with the Most and Least AI Exposure

% of U.S. workers in an industry who are most likely to see high or low exposure to AI, 2022.

MOST EXPOSED TO AI

Professional, scientific, and technical services	52%
Finance, insurance, and real estate	37%
Public administration	36%

LEAST EXPOSED TO AI

Other services	48%
Managerial and administrative services	45%
Accommodation and food services	43%

How AI Can Disrupt Any Industry or Profession

As an example, let's take the legal industry. The problem isn't that people will show up to court with a laptop instead of a lawyer. Two things are likely to happen.

One, anyone with simple legal needs will be able to use AI for free or dirt-cheap legal advice. Websites have offered legal forms for a long time, but AI will massively expand the DIY legal market now that ChatGPT-4 has passed the bar exam.

Two, lawyers will be able to use AI to greatly increase their productivity, doing more work in less time. The result? The world will need fewer lawyers, just as it will need fewer accountants, programmers, web designers, and office administrators. As Amy B. Goldsmith put it, "AI isn't going to replace you, but a person using AI will."
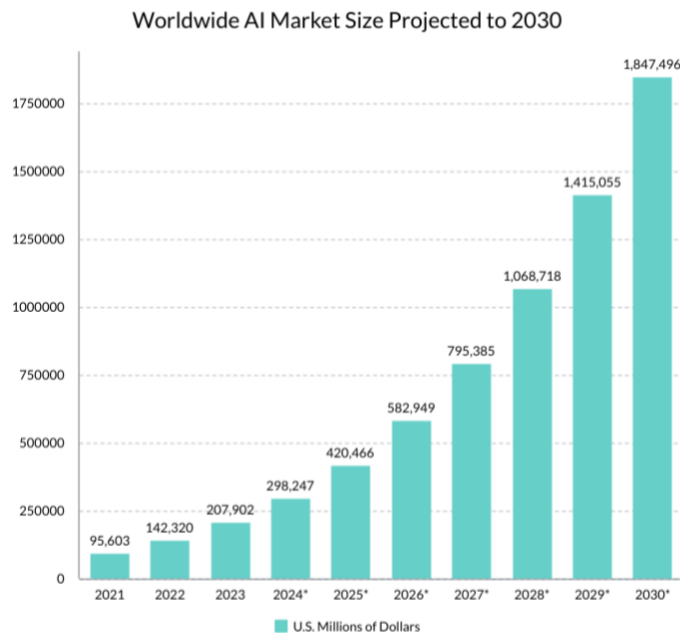
Departments with High AI Potential

Looking at this information from a C-level perspective, these are some functions in your company where AI is most likely to increase efficiency.

- Accounting and Finance
- Administrative and Clerical
- Customer Service
- IT and Tech Support
- Legal
- Marketing and Design
- Sales
- Scientific and Technical

Statistics for AI Advocates

Statista projects the AI market will grow from $207 billion in 2023 to $1.8 trillion in 2030:

Worldwide AI Market Size Projected to 2030

Year	U.S. Millions of Dollars
2021	95,603
2022	142,320
2023	207,902
2024*	298,247
2025*	420,466
2026*	582,949
2027*	795,385
2028*	1,068,718
2029*	1,415,055
2030*	1,847,496

AI Growth and Adoption

- AI will increase employee productivity by 40% by 2035. Source
- ChatGPT gained a million users in 5 days and 100 million in two months. Source
- The adoption of AI has the potential to increase business revenue by an average of 6% to 10%. Source
- Three out of four business leaders identified generative AI as the most significant technology influence on their business within the next eighteen months. Source#More AI growth stats

Accounting

- AI investment in accounting will increase 30% YoY through 2027. Source
- 54% of accounting pros think firms that don't use AI are worth less. Source
- AI could eliminate lower-skilled accounting jobs by 50%. Source
- Using AI for invoice entry reduces costs from $2-$4 to about $0.045. Source
- #More accounting AI stats

Chatbots and Customer Service

- Only 9% of consumers oppose companies using chatbots. 54% want chatbots to make it clear they're not human. 68% like that chatbots answer quickly.

- 85% of call center managers will integrate AI-powered conversation intelligence within the coming year. Source
- By 2027, digital assistants will become the primary channel for client service in 25% of all businesses. Source
- #More chatbot AI stats and #EvenMore

Cybersecurity

- Cybersecurity and fraud detection is second only to customer service as the most common use of AI in corporate America. Source
- AI could automate as much as 45% of cybersecurity tasks. Source
- Organizations that incorporated AI in their cybersecurity operations improved threat detection and response by 12%. Source
- 94% of cybersecurity professionals predict AI will have major impacts on their strategy for the next two years. Source
- #More cybersecurity AI stats

Human Resources

- 58% of HR departments have either invested in or are considering investing in AI for hiring and candidate screening. Source
- 56% of typical HR tasks can be automated with current AI software and limited process changes. Source
- For organizations using AI In HR, the top uses are talent acquisition (64%), learning and development (43%), and performance management (25%). Source
- 56% of companies using AI for HR are automating repetitive tasks. Source
- #More HR AI stats

Legal Services

- AI can reduce time spent on routine tasks by 20%. Source
- Another estimate put the number at 44%. Source
- The AI legal services market will grow at a 31% CAGR from 2023 to 2032. Source
- Some concerns attorneys have about AI include accuracy (57.7%), reliability (48.1%), data privacy and security (46.5%), cost (28.8%), time to learn (22.9%), and difficulty changing processes (17.8%). Source
- #More legal AI stats

Marketing

- Marketing and sales are using AI 40% more than other departments. [Source](#)
- Nearly 90% of respondents intend to allocate a designated portion of their marketing budget to AI tools. [Source](#)
- By 2024, 75% of midsize and large organizations will leverage AI-powered content generation tools for personalized marketing content. [Source](#)
- 4 in 10 marketers believe AI email marketing improves revenue. [Source](#)
- [#More marketing AI stats](#)

Sales

- AI algorithms can increase sales leads by 50%, reduce call times by 60%, and reduce costs up to 60%. [Source](#)
- 84% of salespeople using generative AI say it increases sales by enhancing and accelerating customer interactions. [Source](#)
- 63% of salespeople say their company data is not set up for gen. AI. [Source](#)
- 98% of sales leaders say forecasting accuracy will be improved by AI (41% say major improvement). [Source](#)
- [#More sales AI stats](#)

Software Development

- Programmers using AI can code 126% more projects per week. [Source](#)
- 25% of companies use AI to address a shortage of programmers. [Source](#)
- 41% of businesses believe AI will help fix coding errors. [Source](#)
- Developers using GitHub Copilot can code 55% faster, are 96% faster with repetitive tasks, and are 85% more confident in code quality. [Source](#)
- [#More software development AI stats](#)

AI Tools for Busy Executives

- Abel and Legalizer – Review legal documents faster.
- Airgram, Fireflies, and Otter – Generate meeting transcripts and summaries.
- Anthropic Claude - The free version is dunking on the paid version of ChatGPT.
- Apollo – Find and engage sales prospects faster.
- Attract – Automate the talent acquisition process.
- Beautiful and Slidesgo – Quickly build effective PowerPoint decks.
- Canva – Everyone's favorite online graphics tool has embraced all things AI.
- ChartPixel and Piktochart – Create charts, slides, and insights from business data.
- Durable and Relume – The nerd-free way to build a website in minutes.
- EdrawMax – Diagram, chart, and flowchart gizmo.
- Glasp – Summarize that mind-numbing TED Talk video.
- Gong – Sales workflow automation and sales call analyzer.
- Grammarly – The popular AI grammar checker now generates and rewrites text.
- HireVue – Streamlines hiring by auto-evaluating video interviews.
- Jasper – AI content generator that incorporates brand tone and messaging.
- Mailbutler - Composes email, creates tasks, and extracts contacts.
- LogoAI and Tailor Brands – Generate company logos and branding materials.
- Paradox – Conversational recruiting software for hiring automation.
- Perplexity – AI chatbot for research. Cites sources.

Image, Audio, and Video Generators

- Adobe Firefly - Powerful but easy to use image and video generation and editing, on the web or within Photoshop. Copyright-safe, with commercial use allowed.
- DALL-E – ChatGPT-powered image generator. Images can be edited.
- ElevenLabs, Lovo, Murf – Text to speech and voice cloning.
- Getty Images AI - Copyright-safe images. Commercial use allowed.
- FlexClip, InVideo, Pictory, and Synthesia – Powerful, easy-to-use video creators.
- Ideogram - The best free generator when the image includes text.
- Midjourney - Generates highly photorealistic images. Bit of a learning curve.
- Sora - Stunning, cinematic videos up to one minute in length.
- Stable Audio and Udio – Create music even if you never went to band camp.

AI Risks and Copyright FAQ

What are some business risks of AI?

- Sometimes AI-generated text contains "**hallucinations**" – statements that simply aren't correct and may not be remotely true or even possible. X's Grok AI bot got confused by an article saying NBA player Klay Thompson was "throwing bricks," a slang basketball term for missing a shot. Grok then hallucinated a coo-coo bananas story with the headline "Klay Thompson Accused in Bizarre Brick-Vandalism Spree."

- Most generative AI does not cite sources, so it's difficult to know how reliable the information is.

- The data used to train an AI might be manipulated, sometimes referred to as data poisoning.

- Companies must observe regulatory frameworks like the Global Data Protection Act (GDPR) and California Consumer Protection Act (CCPA) when supplying AIs with training data.

- As generative AI gets better, the quality and prevalence of deep fakes and impersonations will increase. Example: it's gotten very easy for someone to use recordings of the CEO's speaking engagements to voice train an AI to deliver a message that sounds exactly like the CEO.

- An uptick in cybersecurity threats is being attributed to generative AI. Source

Some U.S. government agencies, some healthcare institutions, and a third of U.S. banks have prohibited some or all employees from using generative AI. So have some tech companies like Apple, Google, and Verizon. (Alanis Morrisette should write a song about the irony of companies with AI technology banning AI.)

Are there copyright risks with AI-generated content?

Image generators like DALL-E 2 learned to draw by scanning a massive number of images on the Internet, many of them copyrighted. Likewise for ChatGPT and web pages. Media companies have sued AI companies for infringement. The New York Times sued OpenAI and Microsoft. Getty Images sued Stable Diffusion and was able to show the court AI-generated images that included the Getty watermark. (Busted!)

To avoid copyright issues, businesses can use image and video generators trained on assets the generation company has a legal right to use. Adobe Firefly, for instance,

uses the Adobe Stock catalog of images and videos for inspiration. Adobe is also paying video owners $3/minute to use their videos for training.

FWIW, 80% of companies employing generative AI are confident they can mitigate risks.

How can I check for wording and images that are too similar to copyrighted material?

- For images, upload them to Google Lens, which will look for images that resemble them.
- For text, use Microsoft Word's built-in plagiarism detector. Click Editor in the Review tab and click "Check for similarity to online sources."
- Grammarly has a free tool to detect similar online content.
- You can use tools like ChatGPTRewriter, FlowGPT, and Typli to rewrite generative AI output for copyright avoidance and to remove clues that Google might use to detect AI content (they're not what you'd call fans) so your SEO isn't jinxed.

Can I copyright AI-generated content?

In 2023, a US court ruled that work which has been generated by AI *with no human input* can't be copyrighted. It isn't clear how much human input has to be involved for copyright protection to attach. Source

Can AI-generated text and images be used commercially?

Great question! The not-great answer: it depends! Some generators allow commercial use, and some don't. You'll have to read the terms of use.

Other AI Resources

- AI Rankings
- AI Tools Directory
- Insidr Best AI Tools Directory
- LMSYS Chatbot Leaderboard
- Pew Research Center AI reports

- Stanford Artificial Intelligence Index
- Neuron AI newsletter and podcast
- TLDR AI newsletter
- Vistage AI Resource Center

Ranking the Tech Giants on AI

OpenAI is the AI pioneer behind ChatGPT, the one AI tool everyone knows. A few of OpenAI's investors include Sequoia Capital, Amazon Web Services, and co-founder Elon Musk, who stepped down in 2018. OpenAI's image generator is called DALL-E.

Microsoft has emerged as a breakaway leader in business AI. It has a 49% stake in OpenAI and as of March 2024 has invested in 74 AI startups. Microsoft has already incorporated its Copilot AI is into Windows 11, Bing, and Office 365. Its Image Creator is highly rated.

Google's answer to ChatGPT is Gemini. Google now includes Gemini-generated information for many searches. One review rated their AI-enabled Google Assistant higher than Alexa and Siri. Google also offers the ImaGen image generator.

Apple won't release its chatbot until late 2024 and will license OpenAI and Google AI technology on the iPhone, an embarrassing situation for the legendary innovator. Apple's latest chip, the M4, is enhanced for AI.

Meta, Facebook's parent, has its Llama AI, which powers Facebook's newsfeed recommendations and search results. They got attention in 2023 for their AI-powered Meta Ray-Ban Smart Glasses, which could make Tony Stark's Jarvis eyeglass-based AI assistant a reality.

Amazon's new Rufus AI chatbot helps customers get product information and compare products. Amazon is using generative AI to help advertisers produce compelling text and images and to help sellers write product descriptions.

Amazon Web Services (AWS) will prosper from a flood of new AI ventures that need hosting. AWS has developed AI services to help AI developers go to market and invested $4 billion – its biggest outside investment in the company's history - in AI firm Anthropic.

On the hardware side, **Nvidia** has emerged as the favorite in the AI chip space. Nvidia's stock price surged 1200% in the past four years. They're now one of the five most valuable tech companies, with a market cap rivaling Apple and Google.

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About Atiba

Custom Software	IT Services	Mobile Apps	Digital Marketing	Web Design

Founded in 1992, Atiba provides custom software, IT services, managed services, and digital marketing for some of Nashville and America's best-known brands.

Our Customers

accenture Deloitte. DELL DOLLAR GENERAL Expedia HCA Healthcare

VANDERBILT UNIVERSITY CMA COUNTRY MUSIC ASSOCIATION THE Loveless CAFE Make-A-Wish NASHVILLE AREA CHAMBER OF COMMERCE Pinnacle FINANCIAL PARTNERS RJYoung

St. LUKE'S COMMUNITY HOUSE BONGO JAVA · NASHVILLE NewsChannel5 NASHVILLE The Gideons International the Y

Our Cloud Partners

aws CISCO CITRIX datto Google Cloud Google Workspace Azure

Microsoft Hyper-v Microsoft 365 vmware

Our Programming Proficiencies

android ANGULAR Drupal iPhone HubSpot Java Joomla! Microsoft .net

Power BI SharePoint Microsoft SQL Server MySQL ORACLE php PostgreSQL

python RAILS React React Native +ableau Vue.js WORDPRESS

Let's Talk **615-353-1921** – **info@atiba.com** - **www.atiba.com**