



Welcome to our AI Survival Seminar

John 'Joc' Jacquay



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Part 1 : Why Now



NextGen AI Survival

A very focused program :

WHY NOW

Job market changes

Internet and Internet of Things drive AI

**Up to 30% of hours worked today
could be automated by 2030.
(McKinsey 2023)**

The Artificial Intelligence Realm

Layers of AI

Evolution of AI Capabilities

Risks / Opportunities

**41% of recent grads
underemployed (NY Fed, 2024).**

Impact on YOUR Career

College vs. AI “degree” opportunities

Gig Economy

AI Entrepreneurs

Selling YOURSELF



Own your own Career

Future Jobs and Entrepreneurial Opportunities changing rapidly

Many fewer new hires ... fierce competition ... AI Copilot !!!

As of early 2024, 59% of recent college Grads jobs did NOT require a college degree (Fed NY)

... diploma plus relevant, adaptable skills will still open doors.

However, there will be unprecedented wealth creation opportunities

Preparing now is ESSENTIAL ...



Are YOU AI Career-Ready?

High Schools (U.S.):

- Only 51% of high schools offer computer-science courses; AI-specific tracks are rare. (Code.org, 2024)
- **Most grads leave without job-ready digital or AI skills.**

Colleges:

- Strength: teach critical thinking & research.
- **Gap: course updates often lag 5-10 years behind industry needs. (Brookings, 2023)**

Key Takeaway:

- ***A diploma alone won't guarantee opportunity.
Competitive advantage = degree + technical skills + adaptability.***
- ***AI Degree (for free) is in HUGE DEMAND***



Foundational Digital Career Skills

Digital Communication & Collaboration

Email professionalism, chat (Slack/Teams), virtual meeting etiquette

Data Literacy

- Understanding spreadsheets (Excel/Google Sheets).

Cybersecurity Awareness

- Protecting personal data and respecting privacy.

AI & Automation Basics

- Prompting skills (asking AI to draft, brainstorm, summarize).
- Recognizing AI's limits (bias, fact-checking).

How Do you Stack Up



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Part 2 : Internt and Internet of Things



The Internet / Internet of Things DRIVES AI

AI Applications rely on Data Availability

WWW & Internet of Things provide much of the Data

Data is transported by the Internet

**'By 2030, there will be 50 billion IoT devices
connected globally
(Statista, 2023).'**



The Internet

The Internet is vast global set of High Speed Fiber Optic and Cellular / Satellite networks

Each network is connected to an Internet Service Provider

Each network has millions of connections to End Users

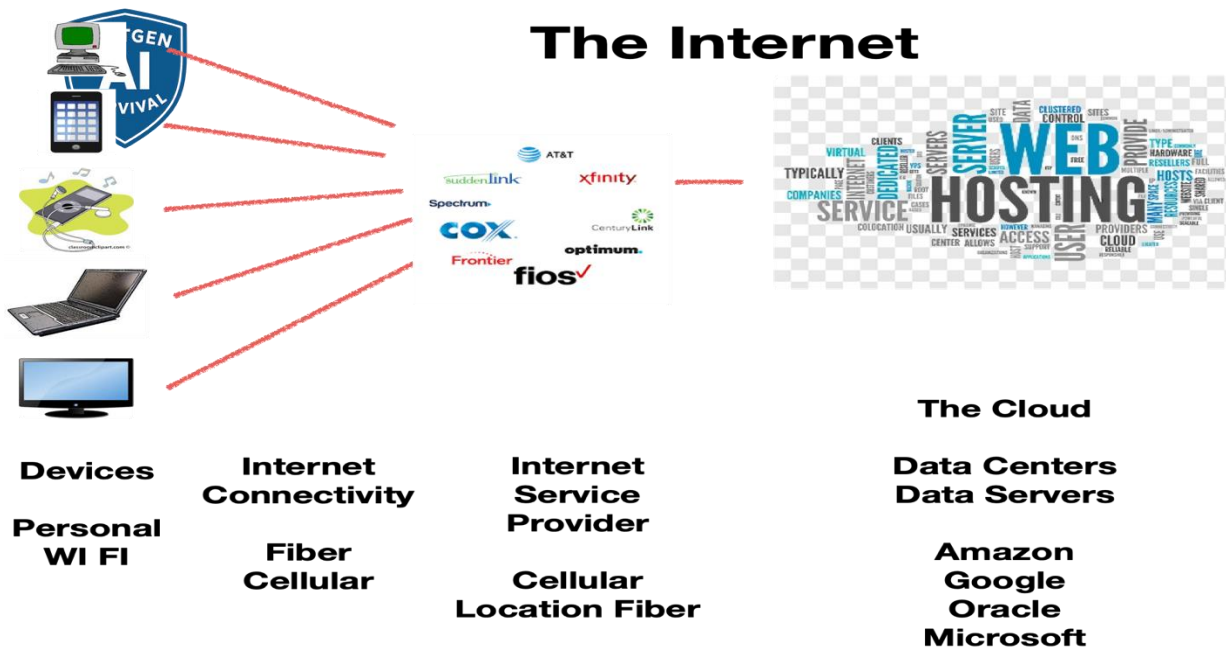
The Internet has its' own unique language



Amazon
Google
Oracle
Microsoft



The Internet



5. Google sends answer back to Google's ISP who sends it to your ISP

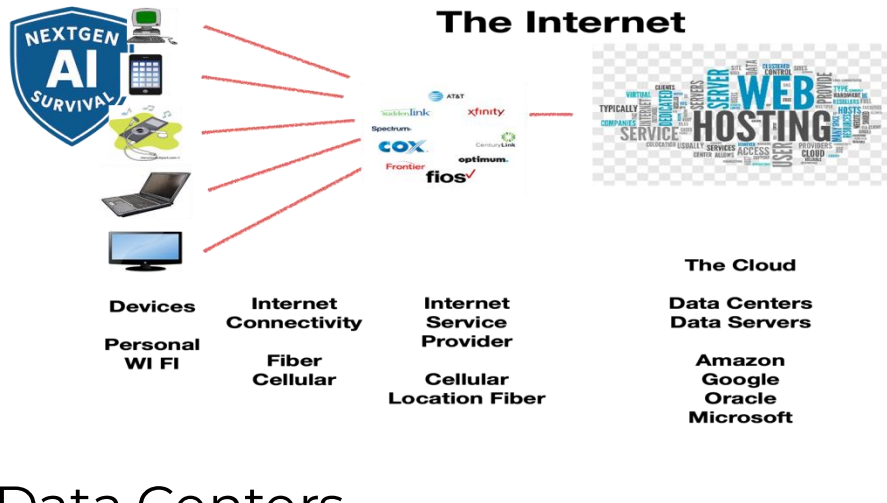
6. Your ISP then sends it to your device and your device translates and it shows up on your Device

IN MILLISECONDS ... think blink of an eye

1. Your Device translates your request into the language of the Internet and sends it to your ISP
2. Your ISP says yup, here is a legitimate request and I need to send it to the nearest Google Data Server.
3. Google's ISP authenticates request ... sends to Google Cloud
4. The Google Cloud creates and sends response

EVERY REQUEST YOU MAKE ON YOUR DEVICE GOES THROUGH THIS

EVERY HUMAN, EVERY DEVICE, 24 X 7 365 DAYS A YEAR



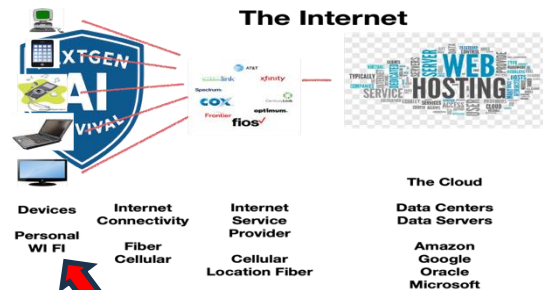
Data Centers

Facility with thousands of servers, storage systems, and networking gear.

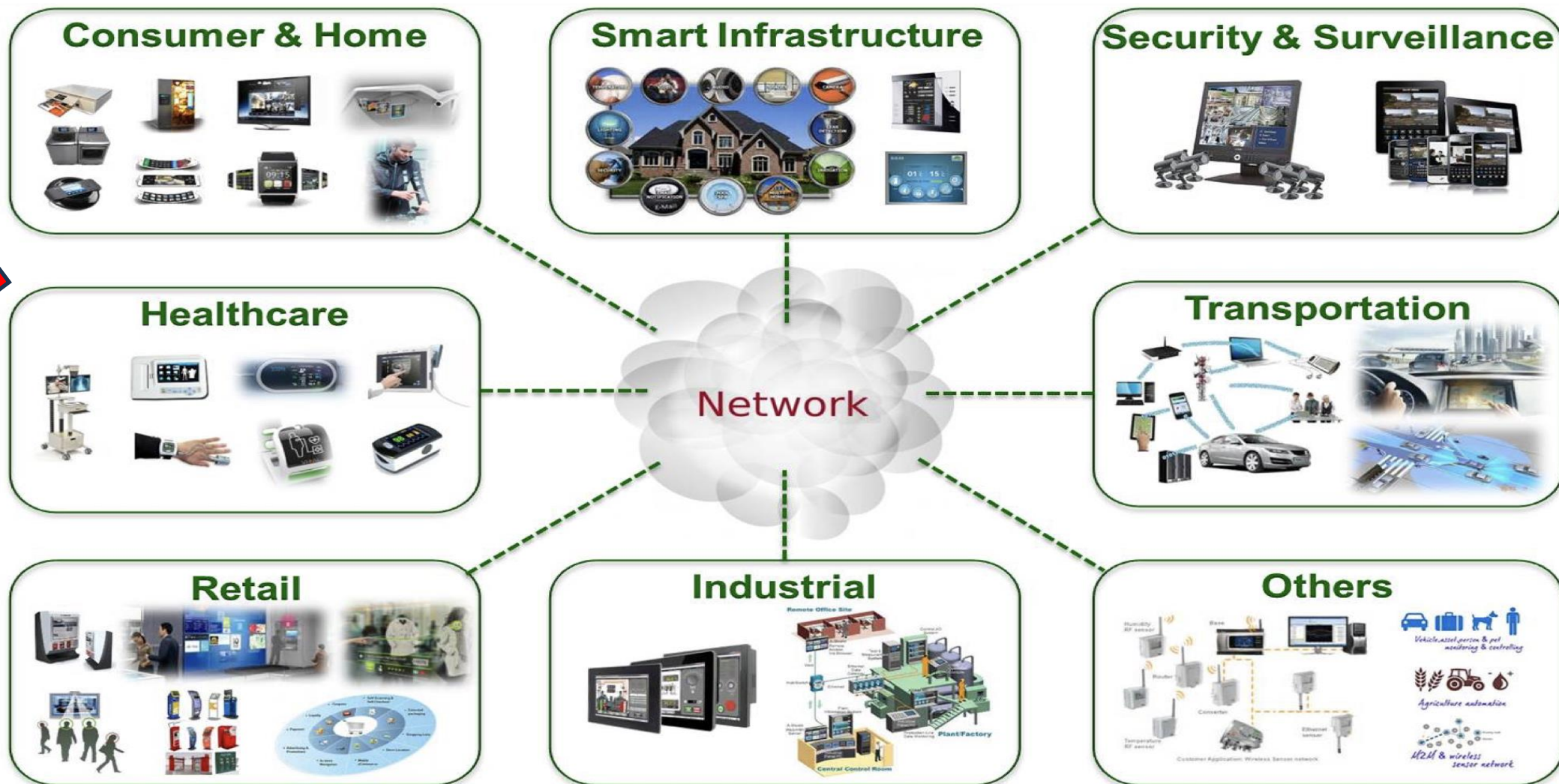
- FORMS THE CLOUD

- Requires huge amounts of power and cooling and POWER





THE INTERNET OF THINGS





How IoT Works

- **[1] Device/Sensor: Collects data (temp, movement, heart rate)**
- **[2] Network Transmission: Sends data via Wi-Fi, 5G, Bluetooth**
- **[3] Cloud/Data Center: Stores, processes, and analyzes data**
- **[4] Application/Action: Provides feedback or automates actions**
- **→ Example: Smart thermostat adjusts heating automatically**



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Part 3 : Data



Where AI Gets Its Data

1. **Publicly** Available Internet Data
2. **Private** Enterprise / Organizational Data
3. Sensor & Machine Data
4. User-Generated Content
5. Industry -Specific / Regulated Data



Data Is the Lifeblood of Artificial Intelligence

- Data is to AI what oxygen is to life.
- Every insight, pattern, and prediction comes from data.
- If AI is the engine, data is the fuel that powers it.



Data Trains, Executes, and Evolves AI

- Training Phase:
 - - Labeled data teaches accuracy (supervised learning).
 - - Unlabeled data reveals patterns (unsupervised learning).
 - - Reinforcement data rewards correct actions.
- Execution Phase:
 - - AI makes real-time decisions using live data streams.
 - - Example: Cars use sensor data, financial bots use market data.
- Feedback Loop:
 - - New data refines and improves AI performance over time.



Data Is the DNA of AI

- The quality of AI depends on the quality of its data.
- Data defines what AI knows, how it behaves, and how it grows.
- Summary Line: “Data builds the brain, fuels the body, and evolves the intelligence.”



The Privacy Challenge

-  **Risks:**
- **Billions of devices = trillions of data points.**
- **Highly sensitive info (health, GPS, video feeds).**
- **Corporate IoT may reveal trade secrets or customer data.**
- **→ Without protection, personal and business data can be exposed.**



Guardrails to Protect Data

 **How to stay safe:**

- 1. Encryption – scramble data so only authorized users can read it.**
- 2. Data Minimization – collect only what's necessary.**
- 3. Access Controls – limit who can see data.**
- 4. Anonymization – remove personal identifiers.**
- 5. Regulations – GDPR, CCPA enforce privacy rules.**



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Part 4: Artificial Intelligence



Artificial Intelligence

The science and engineering of creating computer systems / applications that can perform human like tasks such as learning, reasoning, problem-solving, and simple decision-making and then execute action.”

Artificial Intelligence is when apps are built to think and learn like people, so they can solve problems, make decisions, and even get better over time.



Simple Example ...TikTok or Instagram Reels feed:

When you “like” a dog video, the app learns from your choice. Next time, it shows you more dog videos — the AI is learning what you enjoy and making decisions about what to put in front of you.

AI helping with fun, personal experiences.

Complex Example Self-driving cars (like Tesla or Waymo):

The car’s AI uses cameras, sensors, and maps to “see” the road, recognize pedestrians, read street signs, and make split-second decisions about when to stop, turn, or accelerate.

AI handling huge amounts of data in real time to keep people safe.



The Three Categories of AI

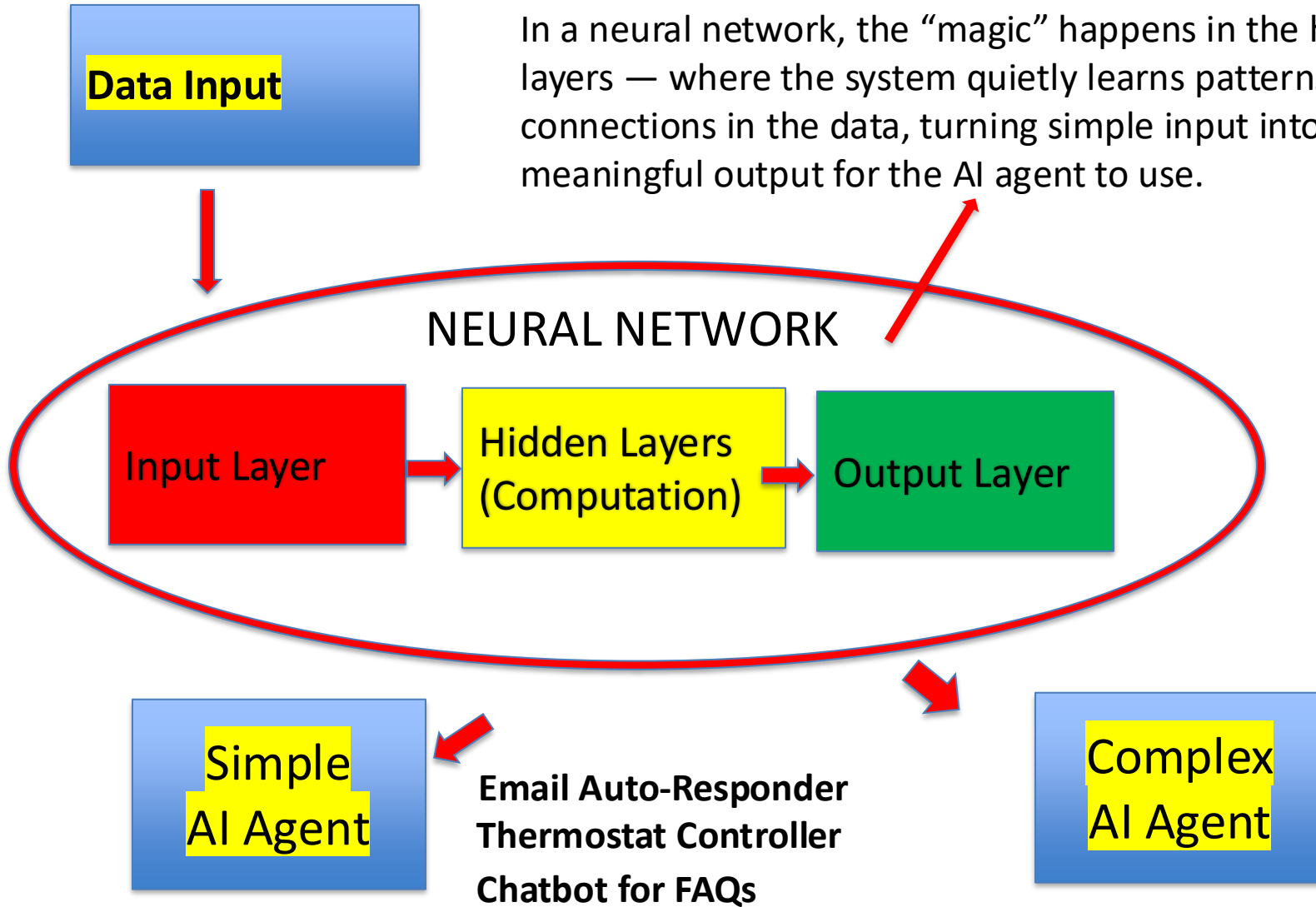
- **Narrow AI (Weak AI)**
 - Today's reality PERFORMS TASKS INTERFACES WITH SINGLE DATA DOMAIN
- **General AI (AGI – Artificial General Intelligence)**
 - Still theoretical / in research
 - One system that can do many different tasks, across DIFFERENT domains and transfers knowledge between them
- **Superintelligent AI (ASI – Artificial Superintelligence)**
 - Future concept
 - Surpasses the smartest humans in every domain: science, art, strategy, creativity, decision-making
 - Not just human-like, but far beyond human ability



Private Domains

Public Domains

NARROW AI



Multiple Tasks, One Shared Knowledge Base

 Why Most Complex Agents Require Access to Private Data Domains

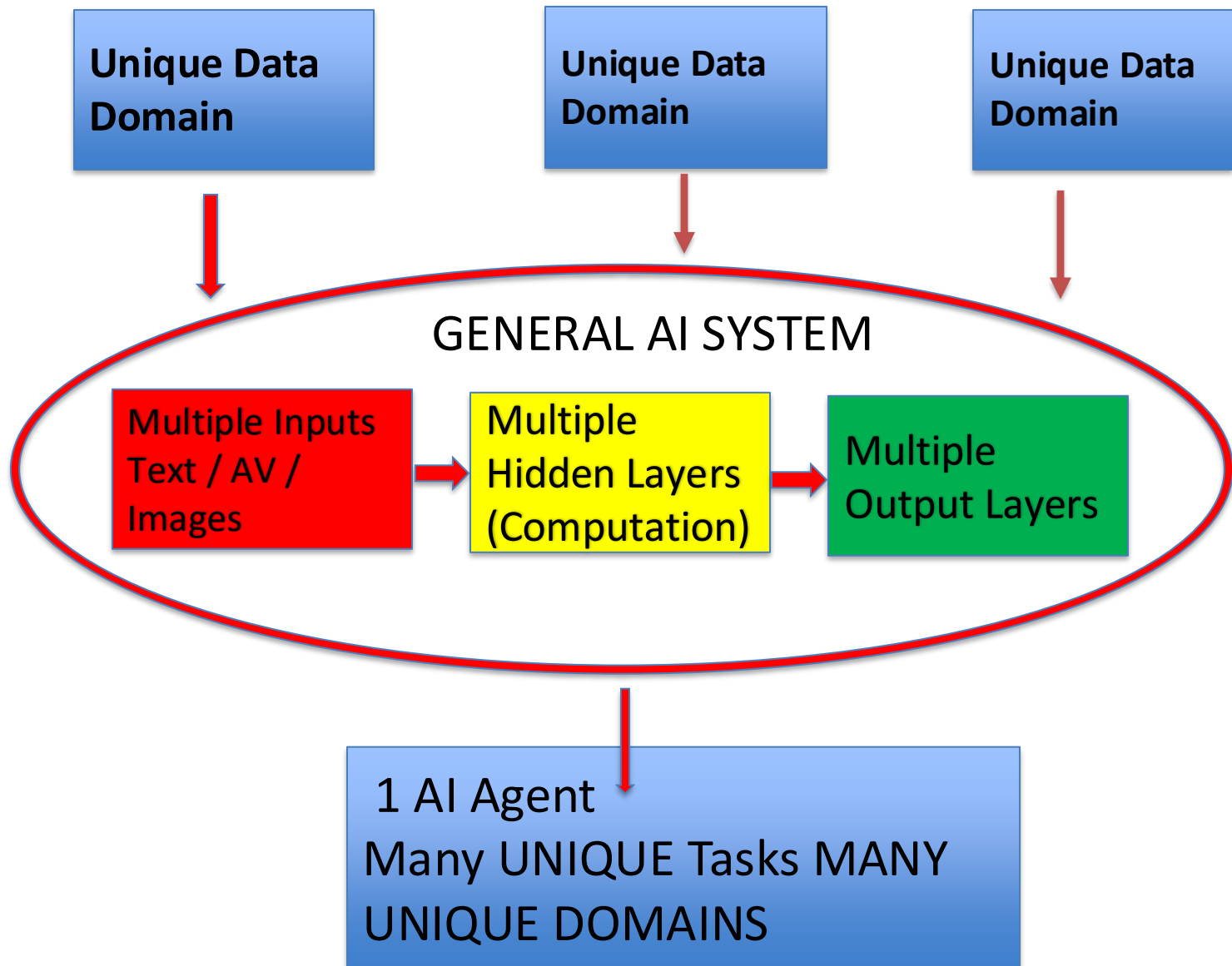
Personal AI Travel Agent

 **Waymo**

IBM Watson Orchestrate



GENERAL AI



***IMAGINE A SINGLE AI AGENT
THAT CAN SIMALTANEOUSLY***

***DRIVE YOUR CAR (Tesla unique
data)***

***PROVIDE YOU FEEDBACK ON
YOUR DOCTOR VISIT (Your
personal Medical Records)***

***REVIEW YOUR INCOME TAXES (
YOUR PERSONAL FINANCIAL
RECORDS)***



👉 **Today's reality:** each **narrow AI system** is specialized — a self-driving car AI can't write essays, and ChatGPT can't drive a car. THEY USE UNIQUE DATA DOMAINS

👉 **Goal of General AI:** **ONE** single agent that can **learn and perform many different tasks** ... BY USING **UNIQUE DATA DOMAINS**

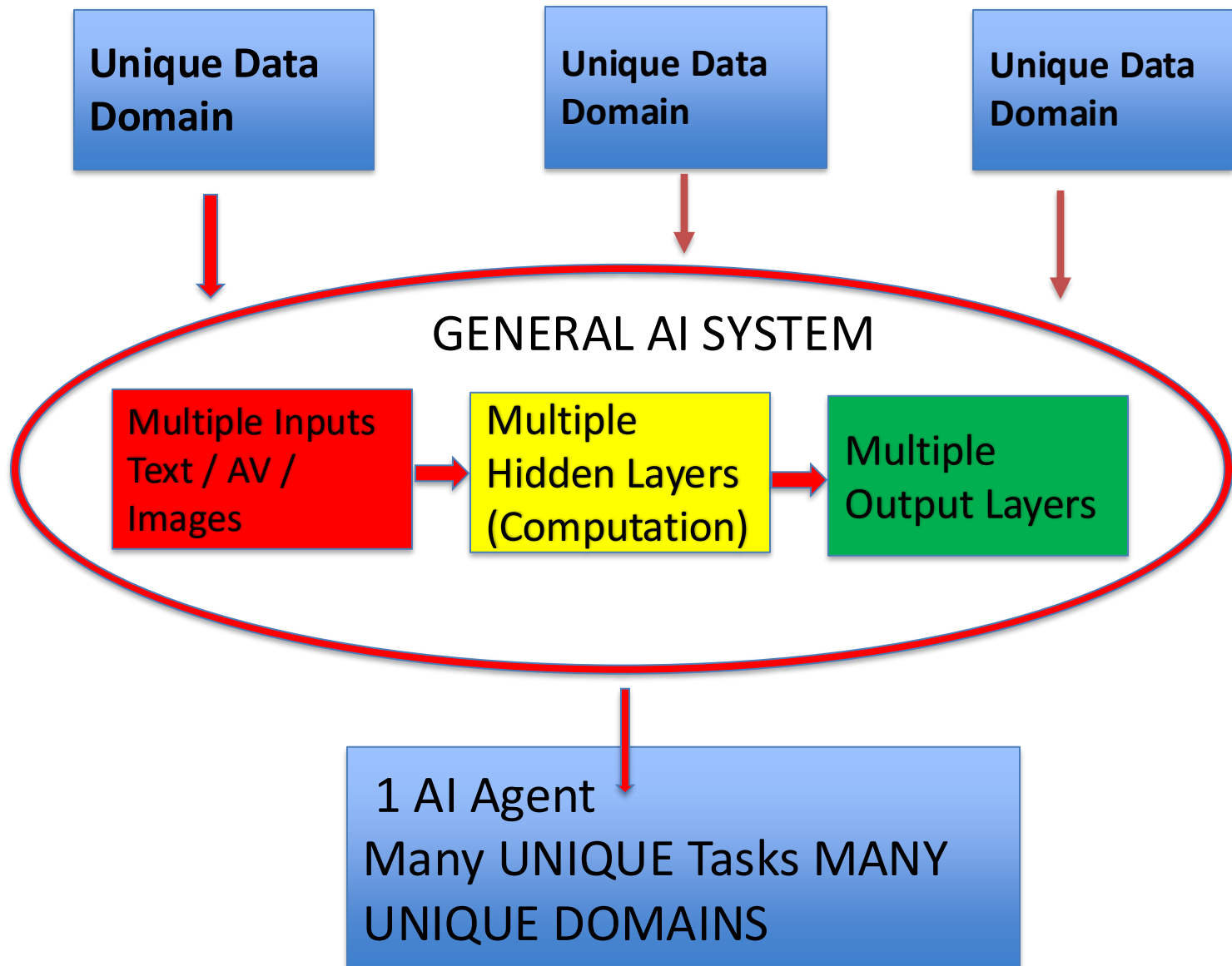


Müller & Bostrom (2025 expert survey)

Their survey finds the **median expert estimate** is that “high-level machine intelligence” will arrive around **2040–2050**, and many expect the leap to superintelligence to follow within 30 years after that.



GENERAL AI



***IMAGINE A SINGLE AI AGENT
THAT CAN SIMALTANEOUSLY***

***DRIVE YOUR CAR (Tesla unique
data)***

***PROVIDE YOU FEEDBACK ON
YOUR DOCTOR VISIT (Your
personal Medical Records)***

***REVIEW YOUR INCOME TAXES (
YOUR PERSONAL FINANCIAL
RECORDS)***



1.Data ingestion: Within hours of first cases, ASI is reading billions of medical records, social-media posts about symptoms, wastewater viral data, travel logs, and hospital imaging scans—in every language, in real time.

2.Insight generation: By lunchtime that same day, it spots a hidden pattern: a rare protein mutation that human scientists would need months or years to notice.

3.Scientific discovery: It simulates millions of potential drug molecules in parallel, then designs a completely new antiviral compound—predicting effectiveness and side-effects before a single lab experiment.

4.Global coordination: It drafts production blueprints for manufacturers, proposes optimal logistics routes to deliver medicine worldwide, and even negotiates with national governments—all in the same day.

5.Strategic judgment: Throughout, it weighs health outcomes, supply-chain bottlenecks, ethics, and political dynamics better than any team of human experts could.



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Part 5: AI Agents



Private Domains

Public Domains

NARROW AI



Data Input

In a neural network, the “magic” happens in the hidden layers — where the system quietly learns patterns and connections in the data, turning simple input into smart, meaningful output for the AI agent to use.

NEURAL NETWORK

Input Layer

Hidden Layers
(Computation)

Output Layer

Simple
AI Agent

Email Auto-Responder
Thermostat Controller
Chatbot for FAQs

Complex
AI Agent

Multiple Tasks, One Shared Knowledge Base

 Why Most Complex Agents Require Access to Private Data Domains

Personal AI Travel Agent

 Waymo

IBM Watson Orchestrate



AI Agents vs. Agentic AI

AI Agents

Defined scope – single task/domain

Reactive – respond when prompted

Rules + models – follow pre-set logic

Short-term – little/no memory

One-step execution – stop after task

Agentic AI

Broader scope – chains multiple steps

Proactive – plans and pursues goals

Adaptive reasoning – planning + tool use

Longer-term context – memory included

Multi-step autonomy – works until goal met



Examples: AI Agents vs. Agentic AI

AI Agents (single-task)

- Chatbot for FAQs — answers one question at a time
- Spam filter — flags junk mail,
- Calendar reminder — pops up alerts but won't reschedule
- Waymo's lane-keeping module — stays in lane only

Agentic AI (goal-driven)

- Travel-booking AI — finds flights, books hotel, emails itinerary
- Smart personal assistant — researches & drafts a 10-slide deck
- AI video editor — trims clips, adds captions, exports final video
- Customer-support agent — takes complaint, opens ticket, updates & closes it



Why It Matters

- **Capability jump: Agentic AI handles entire workflows, not just single steps.**
- **Workforce shift: Single-step tasks will be automated first — aim for creative & strategic roles.**
- **Entrepreneur boost: Lets small businesses automate marketing, scheduling, invoicing.**
- **Need for guardrails: Agentic AI acts on your behalf (booking, sending money) → requires safety and trust.**



Risks & Ethics of AI Agents

- **Autonomy without oversight .. may lead to harmful outcomes.**
- **Over-reliance on agents .. could cause human skill loss.**
- **Ethical/legal accountability .. responsibility for agent actions?**
- **Potential misuse .. surveillance, manipulation, or cyberattacks.**



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Part 6: Real Life AI Example



Corporate Agentic AI: The Intelligent Bridge Across Enterprise Systems

How an Agentic AI Layer interfaces with LLMs and corporate data domains (HR, Finance, Manufacturing, Sales)



Corporate Agentic AI System Architecture

HUMAN INTERACTION LAYER
Executives, Managers, Employees

AGENTIC AI ORCHESTRATION LAYER
(LLM + Reasoning + Workflow Agents)

Human Resources System Financial System

Manufacturing System Sales / CRM System

Flow:

1. Human inputs natural language task
2. Agentic AI interprets and delegates to data domains
3. Domain systems respond with data/actions
4. AI synthesizes and delivers insight to user



Step 1: Human Request (Input Layer)

- A regional sales manager speaks to the AI assistant:
- "Atlas, we just got a rush order for 500 units from Costco. Can we fulfill it by Friday without hurting other deliveries?"
- AI interprets intent: fulfill order feasibility
- Entities: '500 units', 'Costco', 'by Friday'
- Constraints: inventory, production, shipping times, margins



Step 2: LLM + Agentic Layer Interprets & Decomposes

- The Corporate Agentic AI Orchestrator breaks the request into sub-tasks:
 - Check stock → Manufacturing System
 - Check production capacity → Manufacturing System
 - Check margin & credit → Financial System
 - Check customer priority → Sales/CRM System
 - Check staffing → HR System
- Each system communicates via APIs or secure connectors.



Step 3: Domain Agents Retrieve Data

- Each domain-specific agent returns structured data:
- Manufacturing: 300 units in stock, can produce 200 more in 36 hours
- Finance: Customer pre-approved, 5% rush surcharge allowed
- Sales: Costco = Tier-1 customer, maintain >95% fill rate
- HR: Overtime available at Plant 2, cost = \$4,000



Step 4: Agentic AI Synthesizes & Responds

- The Agentic AI compiles and evaluates the data:
-  Yes, we can fulfill 500 units by Friday:
- 300 units ship from inventory
- 200 produced via Plant 2 overtime
- Added cost: \$4,000, absorbed by rush fee
- Total margin: 21%
- AI drafts approval and initiates production ticket.
- AI sends email to Costco confirming Order



Step 5: Automated Action & Feedback

- The Agentic AI triggers coordinated actions across systems:
- HR: schedules overtime
- Manufacturing: creates production order
- Finance: updates revenue forecast
- Sales/CRM: marks order as 'expedited'
- AI confirms completion and presents summary dashboard.



Why This Example Matters

- This example illustrates how Corporate Agentic AI:
- Bridges silos between HR, Finance, Manufacturing, and Sales
- **Acts autonomously — not just a chatbot**
- Transforms data into coordinated action
- Delivers end-to-end situational awareness in seconds



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Part 7: AI and your Personal Skills



We now have covered the Internet and IoT and the Cloud

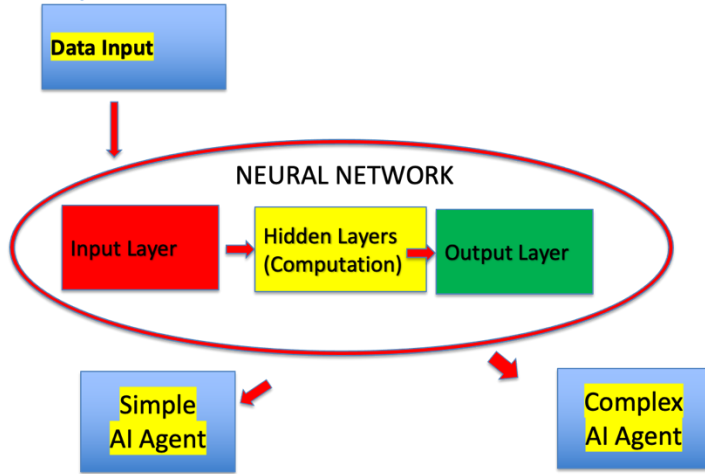
We have covered how AI is using all of this data

Now, what does this mean for your future ...

What will YOU do NOW to best prepare to Thrive



Several Paths to Take



AI Design Technical Expert

AI Implementation Expert

Add AI technical expertise to your degree

Become a NextGen AI Entrepreneur

Gig Economy vs. Corporate



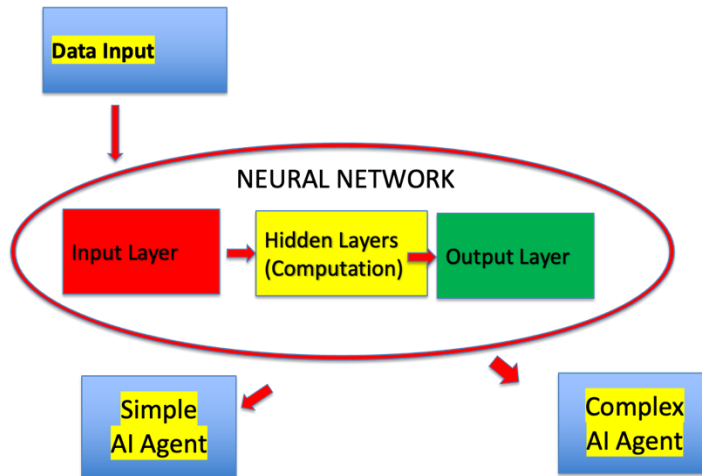


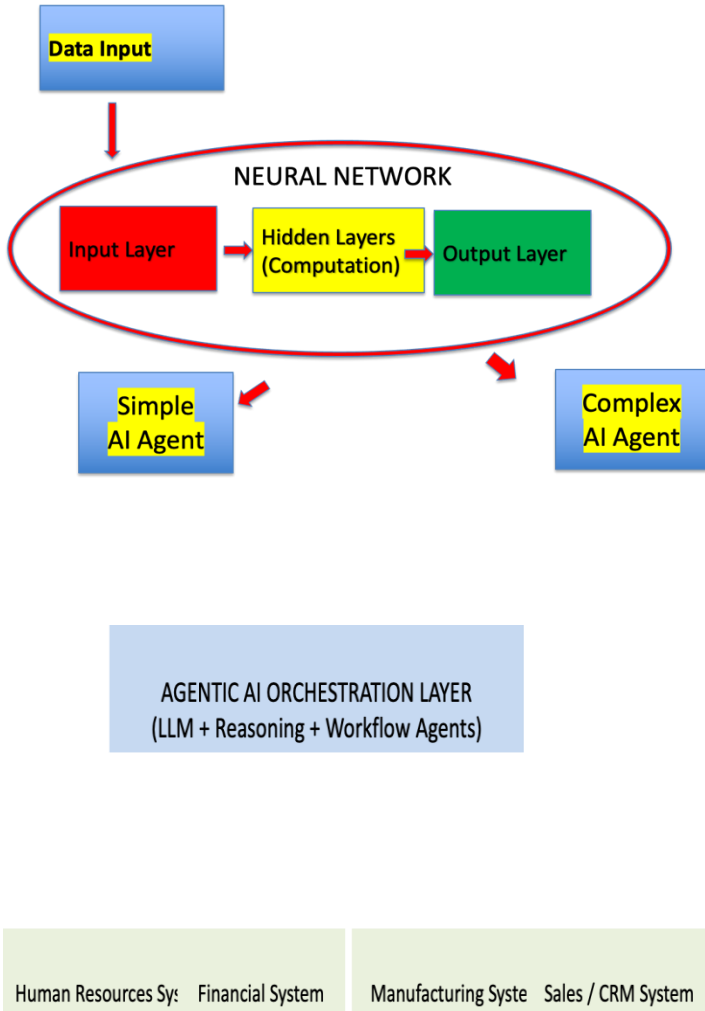
AI Technical Expert'

Deep technical skills in Artificial Intelligence, Data Science, or Robotics

In high demand now — and demand will continue to grow

Employers need specialists who can build, improve, and manage AI systems





AI Implementation Expert

Fastest growing DEMAND in Business ... whether big
Or small business

Requires understanding of traditional Business Systems as well AI Agents and how they can interact ..

Workflow / Authentications / Actions all required between systems

How AI works WITH Humans ... not Replace



Add AI Technical Expertise to Your Degree

- **Business major: Use AI for market research, customer segmentation, and financial modeling**
- **Education major: Build AI tutoring apps or homework helpers that personalize learning**
- **Engineering major: Use AI to prototype designs, test simulations, or optimize energy use**



Why AI Certifications Matter

- AI certifications provide structured, credible pathways to build both technical and applied skills:
- Validate your understanding of machine learning, data, and automation.
- Show employers you can design or implement real-world AI systems.
- Build confidence using AI tools, frameworks, and platforms.
- Differentiate yourself in a rapidly evolving job market.
- Gain credentials from trusted institutions (Google, Microsoft, IBM, Stanford, etc.).



How Certifications Translate to Real AI Capabilities

- AI certifications focus on both design and implementation tracks:
- ****Design Track:**** Learn to architect AI systems — define data inputs, model structure, and performance goals.
- ****Implementation Track:**** Learn to deploy AI models, integrate APIs, and use tools like TensorFlow, PyTorch, or Azure AI.
- Together, they prepare you to:
- Bridge the gap between AI theory and business impact.
- Build systems that process data, learn patterns, and deliver outcomes.
- Lead or collaborate on AI-driven innovation within organizations.



The Rise of the Gig Economy

- The gig economy is a labor market built around short-term, flexible, on-demand work **rather than traditional full-time employment.**
- Workers act as independent contractors or **self-employed entrepreneurs**, offering skills and services directly to clients or platforms.
- Driven by digital technology, workers connect through apps, online marketplaces, and AI-enabled tools.
- Examples include rideshare drivers, freelance designers, online tutors, social-media creators, delivery specialists, and virtual consultants.
- “Freedom, flexibility, and digital reach — the gig economy rewrites how people work and earn.”



Empowering the Self-Employed Entrepreneur

- Gig work enables individual ownership of income and control over time.
- AI tools now allow freelancers to:
- Automate tasks (invoicing, scheduling, customer replies).
- Use AI design, marketing, or content creation systems to scale their reach.
- Compete globally through skill, not geography.



Empowering the Self-Employed Entrepreneur

- **The best gig professionals combine entrepreneurship + AI literacy — knowing how to use digital tools to amplify efficiency and creativity.**
- **“The future workforce blends human creativity with AI-powered independence — turning every gig worker into a micro-enterprise.”**



Become a NextGen AI Entrepreneur

Most Popular Gig Economy AI Roles Today:

- **Video editors for YouTubers/TikTok creators using AI tools**
 - **Resume optimization and LinkedIn rewrites with AI**
- **Logo/design freelancers using AI art tools (Canva, Adobe Firefly)**
- **Copywriters/content creators scaling blogs and ads with AI**

Emerging Gig Opportunities:

- **Virtual AI tutors or personal coaches**
 - **AI-driven fitness or meal planning advisors**
- **Freelance data labelers/trainers for AI companies**
 - **AI workflow consultants for small businesses**



Become an AI Entrepreneur

“AI will create more millionaires in the next five years than the Internet did in 20.”

— Jensen Huang, CEO of
NVIDIA



AI Creates Entrepreneurship Opportunities

- AI tools and platforms are lowering the barrier to entry for entrepreneurs:
- Individuals can now start businesses without large capital or teams.
- The U.S. Small Business Administration notes AI helps automate tasks, analyze data, and boost competitiveness.
- AI enables small ventures to scale rapidly through automation and data insights.
- Entrepreneurs can specialize in niche services — AI content creation, marketing, and personalized solutions.
- Small businesses can now compete with larger firms through efficiency and enhanced customer experience.
- Tagline: “From solo founder to scalable AI-enabled enterprise.”



What Small Businesses Are Launching With AI

- AI is fueling a wave of new micro-businesses and startups:
- AI-powered marketing consultancies (content generation, social media automation)
- E-commerce micro-brands using AI for product selection, pricing, and marketing
- Freelance AI-tool integrators helping other small businesses automate
- Virtual service businesses — tutoring, coaching, and digital products — enhanced by AI
- .”



What Small Businesses Are Launching With AI

- 82% of small businesses say adopting AI is essential for competitiveness (PayPal, 2025)
- AI use cases: content marketing (58%), social media (49%), customer relations (40%)
- AI helps automate repetitive tasks and personalize customer experiences (Shopify, Thryv)
- Tagline: “AI isn’t just a tool — it’s the foundation of the next-gen micro-enterprise.”



Starting a Trade Business with AI Support

- AI is creating opportunities for people to launch skilled trade businesses without college degrees.
- Examples: Electrician, Plumber, General Contractor, or Smart-Home Installer.
- Use AI tools to handle marketing, scheduling, estimates, and customer service.
- Hire gig-economy specialists for specialized tasks (tile, drywall, painting, etc.).
- Build your reputation around being a modern, efficient, AI-powered contractor.
- Tagline: “Leverage AI to work smarter, grow faster, and stand out in the trades.”



Example 1: AI-Enhanced Specialty Contractor

- Core Idea:
- Start as a small, licensed contractor — electrical, plumbing, HVAC — and use AI to manage and scale.
- AI Advantages:
 - Automated job scheduling and estimate generation (ChatGPT, Jobber AI).
 - AI-driven lead generation and local marketing.
 - Instant customer messaging and service updates through chatbots.
 - Use gig workers for overflow and specialized work.
- Outcome: A modern, lean business that performs more jobs per week with less overhead.



Example 2: Smart Home / IoT Installer

- Core Idea:
- Capitalize on the smart home revolution — offer installation and maintenance for lighting, cameras, and automation systems.
- AI Advantages:
 - • Use AI to design system setups and generate proposals.
 - • Predictive maintenance alerts from sensor data.
 - • Automated CRM and follow-ups for recurring service contracts.
 - • Partner with gig electricians or installers for rapid scaling.
- Outcome: Become the local expert for connected homes with AI-powered customer service.



AI Tools for Trade Entrepreneurs

- Top AI Tools to Help You Launch and Scale:
 - **ChatGPT or Claude.ai** – Client communications, estimate writing, marketing posts.
 - **Jobber AI / ServiceTitan** – Scheduling, invoicing, and work order management.
 - **Canva Magic Write** – Quick ad design, social media visuals.
 - **QuickBooks AI** – Automated accounting and expense tracking.
 - **HubSpot AI** – CRM and automated marketing follow-ups.
- Next Steps:
 - 1. Pick one trade niche.
 - 2. Choose 2–3 AI tools to automate core tasks.
 - 3. Build your local gig network.
 - 4. Market as an 'AI-Enabled Trade Business.'



Starting Your Own Business — Powered by AI

Plan & Research (AI as your advisor)

What are you good at ... what do you love doing ?

Market research with ChatGPT / Gemini

Cost & pricing calculators

Competitor analysis from public data

Use AI to develop a complete STEP BY STEP business plan



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Part 8: What Next



Make Your 'Personal Skills' a Key Differentiator

Critical thinking, creativity, communication, and leadership are irreplaceable

Example: Student uses AI to generate slides but still delivers a powerful live presentation

Analogy: AI is the engine, but you are the driver steering it toward impact



AI Collaboration Skills

Learn to prompt, guide, and supervise AI systems

Be the 'human in the loop' who directs AI effectively

AI literacy is becoming essential in every career



Why Presentation & Communication Matter

- Builds trust and credibility.
- Turns ideas into action.
- Inspires teams, investors, and clients.
- Differentiates you from peers with the same credentials.



Why Critical Thinking Matters

- **AI tools deliver quick answers, but not always the right ones**
- **Students need to question sources and context**
- **Employers value independent, analytical thinkers**
- **Critical thinking builds resilience against misinformation**



The Role of AI and YOU

- **AI is a powerful assistant, not a replacement for thinking**
- **Tools like ChatGPT can show multiple perspectives**
- **Students must learn to fact-check AI outputs**
- **Combining human judgment with AI = stronger results**



Practical Skills to Develop

- **Always ask: 'What's the other side of this story?'**
- **Seek out multiple sources of information**
- **Recognize bias in media, AI, and peers**
- **Practice structured problem-solving with AI support**



Real-World Applications

- **Job interviews: show you can analyze and adapt**
- **College work: back up arguments with evidence**
- **Everyday life: spot misinformation online**
- **Career growth: be the person who solves problems others can't**



Certification Pathways

Short courses from Google, AWS, Microsoft, Coursera, and others

Example: A high schooler earns a 6-month AI certificate that lands a junior data analyst job

Analogy: Like getting a driver's license — quick, affordable, and it opens new roads



Communication Skills

- 93% of employers say soft skills are just as important as technical skills. (LinkedIn, 2024)
- Communication consistently ranks #1 among soft skills employers seek.
- 86% of employees cite poor communication as the main cause of workplace failures. (Grammarly, 2023)
- Professionals with strong communication skills earn up to 20% more on average.



Insight: Communication is not optional — it is a career accelerator.



Key Insights for Students

- . The old advice ('everyone should go to college') no longer fits the future.**
 - Winning formula: AI skills-first + adaptability.**
 - Fastest path to in-demand jobs: certifications + AI literacy.**
- College matters, if chosen strategically, not by default.**