ARTIFICIAL INTELLIGENCE (AI)

Applications in Product Management

Prepared by: Dan Yerelian – AI Product Manager (2/10/2025)
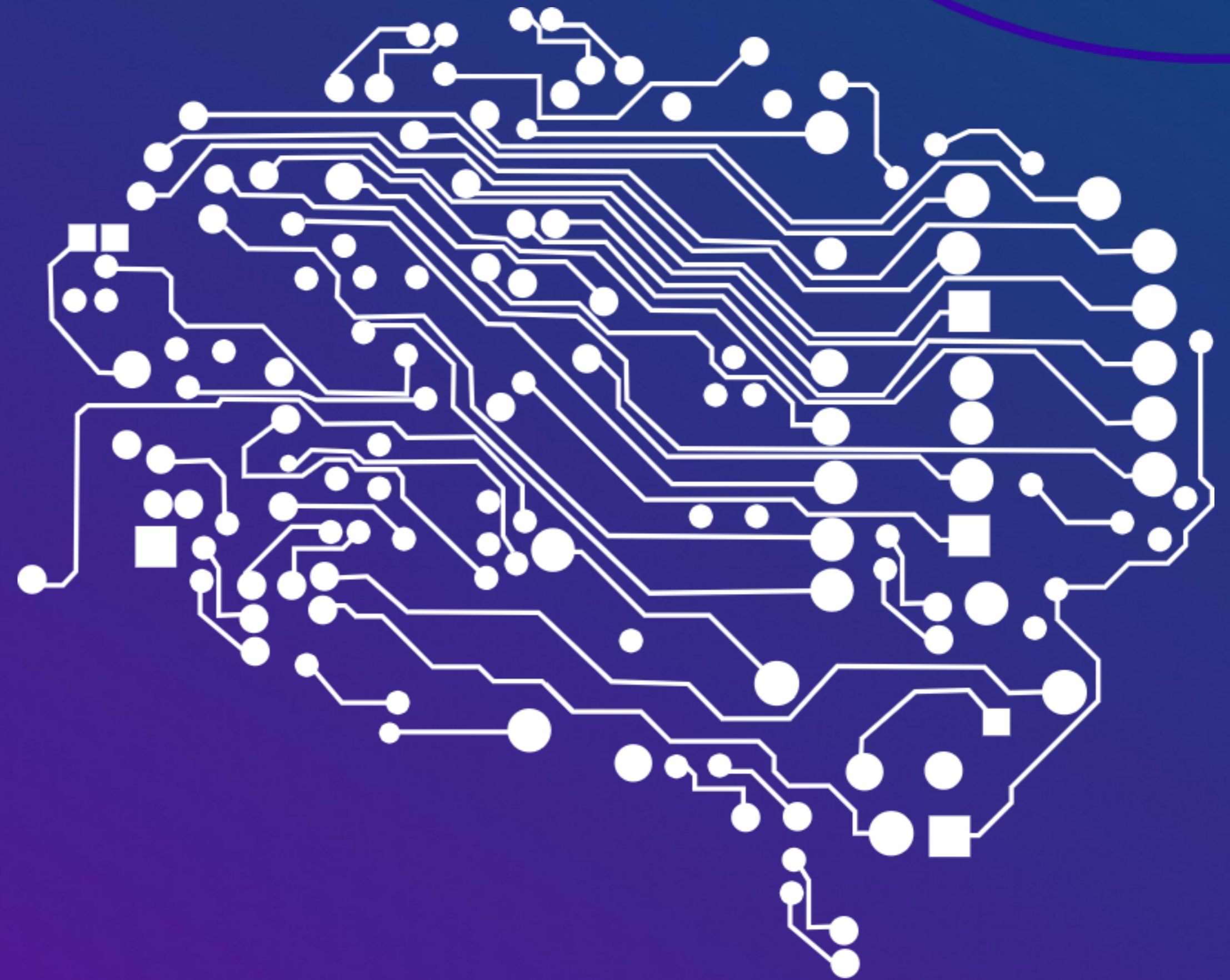
Hi, I'm Dan Yerelian

Who I Am

- Product Management Leader with 9+ years of experience in real estate, digital solutions, and AI
- Current I lead AI Product Management for myLanguage
- Certifications in Generative AI, Prompt Engineering, and Deep and Machine Learning

💡 *We see our customers as invited guests to a party, and we are the hosts. It's our job every day to make every important aspect of the customer experience a little bit better. – Jeff Bezos*

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AI Overview

"It's not about displacing humans, it's about humanizing the digital experience."
- Rob Garf (Salesforce)

01

Types of AI

NARROW AI

Narrow AI is designed to perform a specific task

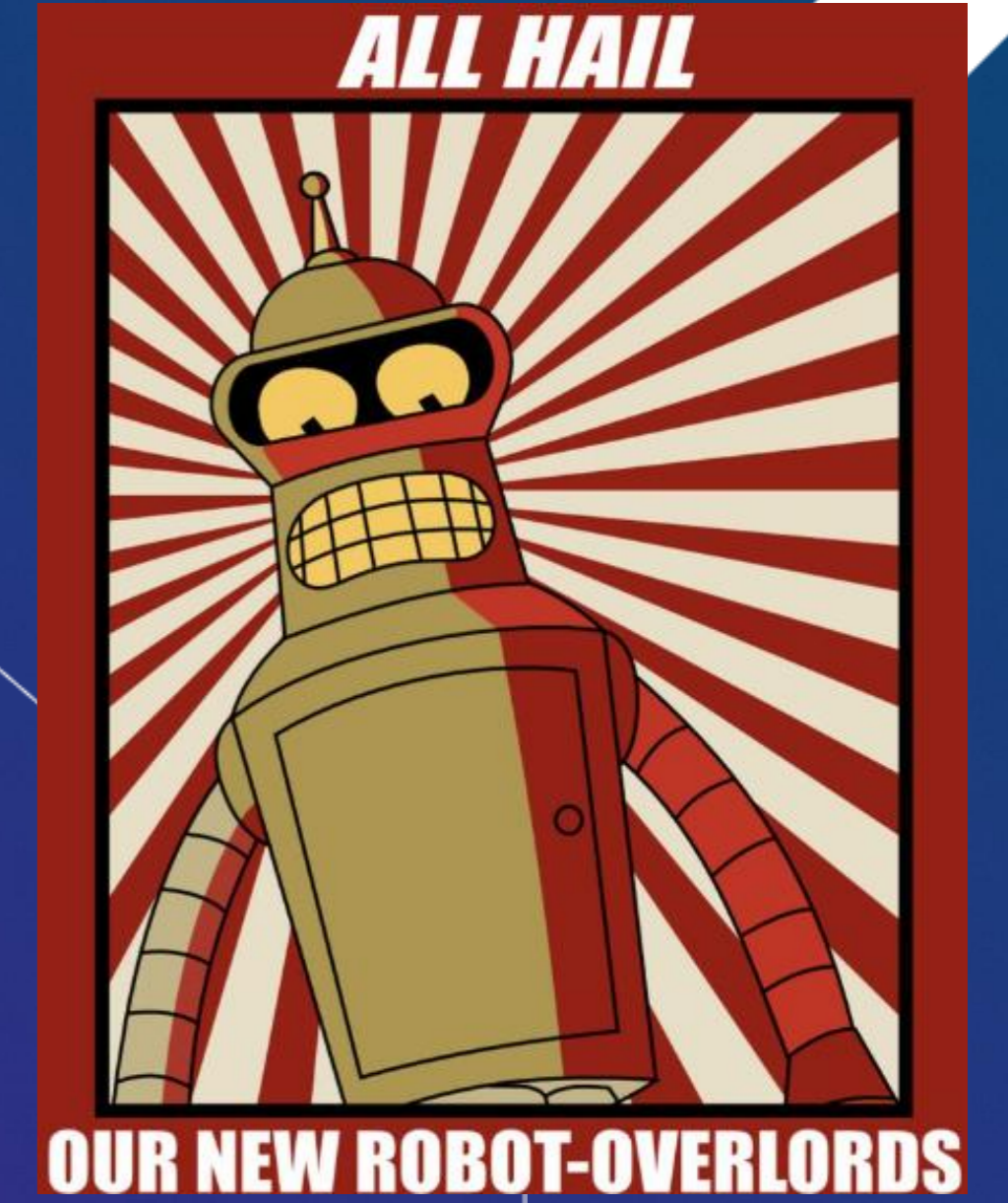**Our focus for today**

GENERAL AI

General AI can perform any intellectual task that a human can do

SUPER AI

Super AI is hypothetical and would surpass human intelligence

ALL HAIL

OUR NEW ROBOT-OVERLORDS

What is Artificial Intelligence

AI is when computers are designed to think and make decisions like humans.

It helps them do tasks that usually need human intelligence, like understanding language, recognizing pictures, or making smart suggestions.
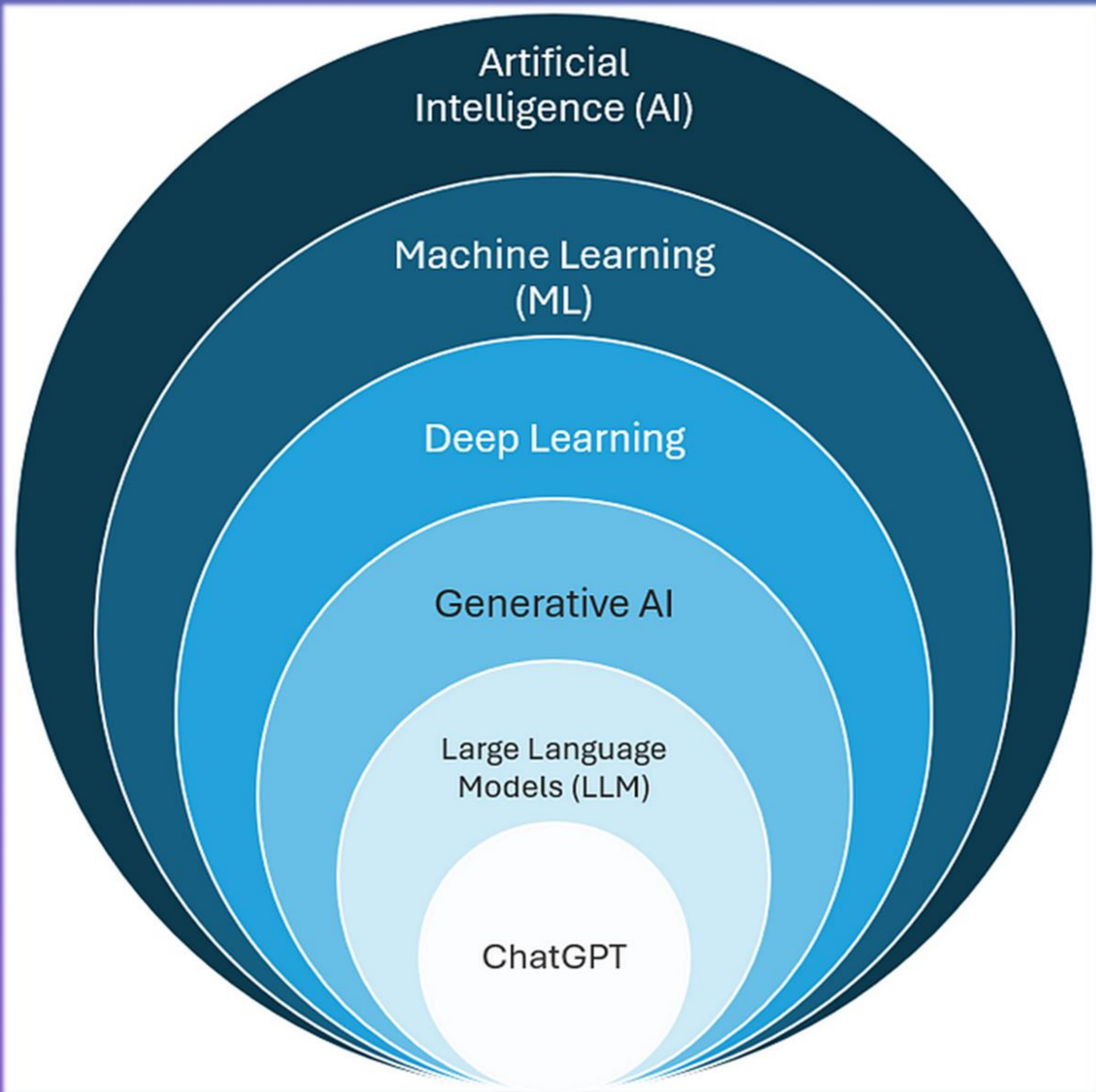
What Artificial Intelligence *is Not*

- AI is not magic / AI is not true human Intelligence: AI can mimic human-like behaviors but does not possess self-awareness, emotions, or consciousness.

- AI is not 100% accurate and relies on data and algorithms, meaning it can make mistakes, exhibit biases, and require oversight.

- AI is not an autonomous decision-maker: AI does not make independent ethical or moral decisions—it operates based on programming and training data.

- AI is not a single technology but an umbrella term covering multiple techniques and applications.

Sub Categories of AI

Artificial Intelligence (AI)
- AI enables machines to mimic human intelligence.
- *Example: A self-driving car navigating traffic.*

Machine Learning (ML) – A Subset of AI
- ML allows systems to learn from data.
- *Example: Netflix recommendations based on history.*

Deep Learning (DL) – A Subset of ML
- DL uses neural networks to recognize patterns.
- *Example: Facial recognition unlocking a smartphone.*

Generative AI (GAI) – A Specialized Use Case of DL
- GAI creates new content like text, images, and video.
- *Example: DALL·E generating images from text prompts.*

Large Language Models (LLMs) – A Type of Generative AI
- LLMs process and generate human-like text.
- *Example: OpenAI Chat GPT summarizing an article.*

ChatGPT – A Specific Application of an LLM
- ChatGPT generates responses from an LLM.
- *Example: ChatGPT answering customer support questions.*

Quick History of AI

The Birth of AI: Alan Turing develops the Turing Test for machine intelligence.
"Can machines think?"

1950

Machine Learning Breakthrough: Neural Networks Improve AI Learning.
Geoffrey Hinton and colleagues develop backpropagation. This enabled AI to recognize patterns in data, leading to modern ML techniques.

1986

IBM's Deep Blue defeated the world chess champion Garry Kasparov, demonstrating that machines could surpass human intelligence in specific domains.

1997

2022

OpenAI launches ChatGPT, a powerful AI chatbot based on GPT-3.5, making AI-generated text widely accessible and sparking mainstream adoption of AI for creative and professional tasks.

Key Concepts

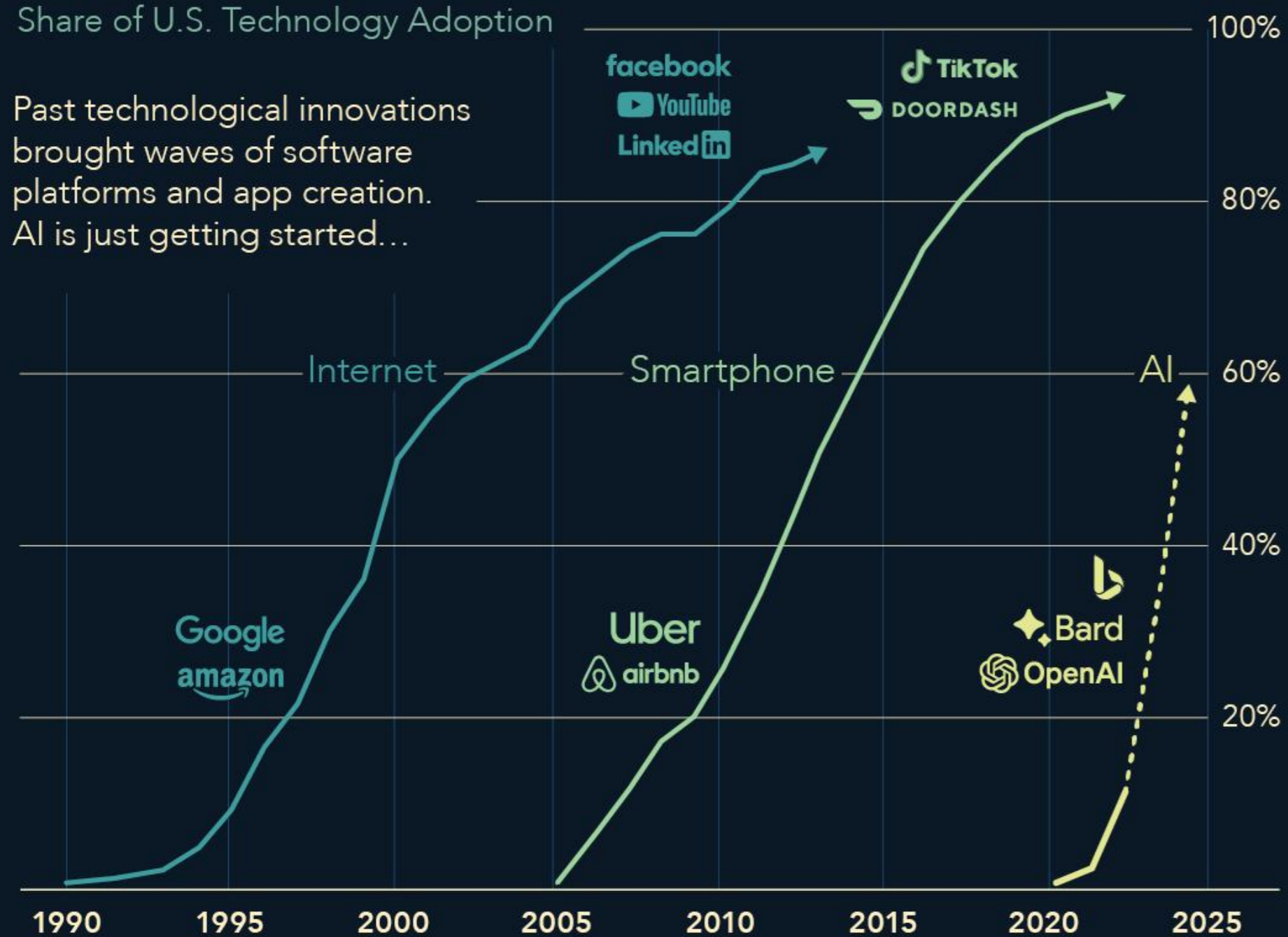| Term	Definition	Example
LLM (Large Language Model)	AI trained on massive text datasets to generate human-like language.	ChatGPT, Google Gemini, Claude AI.
Training vs. Fine-Tuning	Training: Teaching AI from scratch. (4 minute explanation - Andrej Karpathy) Fine-Tuning: Adapting an existing model for specific tasks.	Fine-tuning GPT-4 to write Zonda-specific release notes.
AI Models vs. Applications	Model: The core AI system (GPT-4, PaLM). Application / Inference: A tool built using an AI model (ChatGPT, Bard).	GPT-4 vs. ChatGPT.
Hallucination	AI generates false or misleading information while sounding confident.	ChatGPT making up fake product statistics.
Prompt Engineering	Crafting structured inputs to guide AI responses effectively.	Using role-based prompts to improve ChatGPT output.
Bias in AI	AI inherits human biases from training data, affecting fairness.	AI preferring male-coded terms in job recommendations.

AI Tools

There are many AI tools out there, don't use them all.

Pick one or two that fit your workflow and master them well. Focus on how AI can help you and your customers rather than chasing every new tool.

AI in Product Management

"AI won't replace Product Managers, but PMs who use AI will replace those who don't."
- Marily Nika
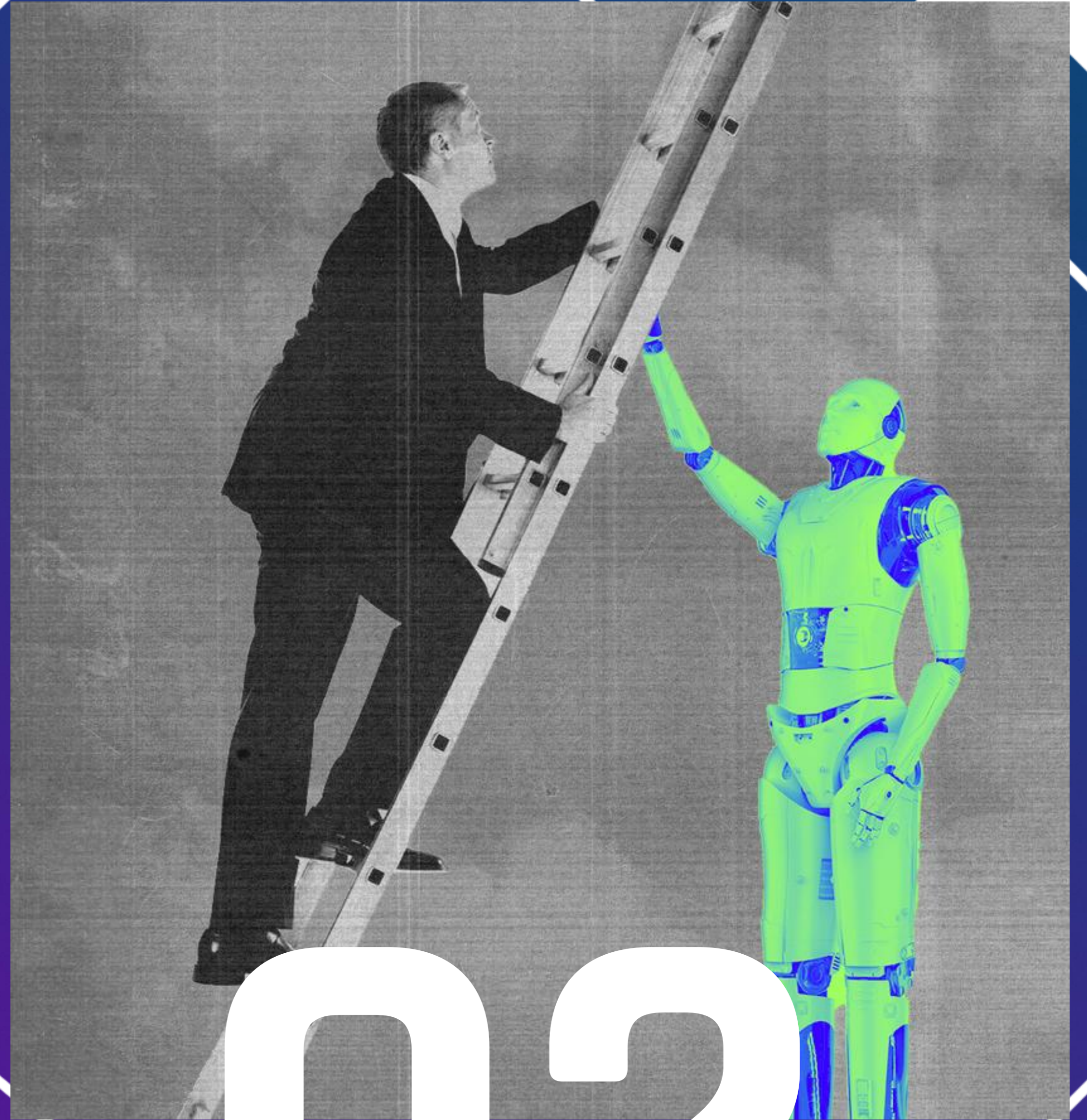
02

AI's Role in Product Management

AI for the Product Manager – Enhancing Efficiency & Insights

- You are the customer – AI solves your pain points
- AI acts as a co-pilot to help PMs work smarter, automate repetitive tasks, and gain insights.

- Examples: AI-powered Jira ticketing, release note automation, AI-assisted market research.

AI Inside the Product – Enhancing the User Experience

- AI more efficiently solves your customers problems.
- AI is embedded within the product to improve customer interactions.

- Examples: Personalized recommendations, chatbots, predictive analytics.

AI Inside the Product – Enhancing the User Experience

Personalization & Recommendations

01

AI analyzes user behavior to offer personalized recommendations, product suggestions, and tailored layouts.

◆ Example: A homebuyer sees suggested floor plans based on past searches and preferences.

◆ Example: AI highlights builder inventory that matches user-selected features.

Conversational AI & Chatbots

02

AI-powered chatbots can guide buyers through the home customization and purchase process.

◆ Example: A chatbot answers questions about financing, home features, or builder options.

Predictive Analytics & Smart Automation

03

AI detects patterns to predict what customers might want next.

◆ Example: "Customers like you chose X" recommendations based on buyer history.

◆ Example: AI alerts builders when a specific home model is trending and adjusts pricing dynamically.

AI for the Product Manager – Boosting Efficiency & Insights

01

Automating Repetitive Tasks

AI streamlines manual and repetitive workflows, allowing PMs to focus on strategy.
◆ Example: AI-generated Jira tickets with structured user stories based on feature requests.
◆ Example: Automated release notes summarizing key updates from sprint work.

02

Analyzing Customer Data & Market Trends

AI synthesizes user research, feedback, and market data to uncover actionable trends.
◆ Example: AI-powered sentiment analysis detects pain points from customer feedback.
◆ Example: AI categorizes user requests to prioritize high-impact product improvements.

03

Decision Support & AI-Assisted Strategy

AI helps PMs prioritize backlog items and roadmap decisions based on user behavior and business impact.
◆ Example: AI suggests which features will drive the highest conversion based on historical data.
◆ Example: AI forecasting tools predict seasonal trends in home-buying behavior.

Focus is on AI for PMs

Factor	AI for Product Managers 🎯	AI Inside the Product 🚀
Primary Goal	Automates workflows & enhances decision-making for PMs	Improves the product experience for customers
Implementation Effort	No engineering needed—PMs can use AI immediately	Requires engineering resources, model training, and development
Customization Needs	Works out-of-the-box with existing tools	Needs domain-specific AI models, user behavior data, and tuning
Setup Time	Minutes to hours—AI tools can be used instantly	Weeks to months—requires full integration into the product
Cross-Team Collaboration	Can be implemented independently by PMs	Requires alignment with engineering, data science, and UX teams
Data Requirements	Uses pre-trained AI models with general knowledge	AI must be trained on product-specific datasets
Scalability & Maintenance	Minimal maintenance—AI models update automatically	Ongoing updates, monitoring, and fine-tuning needed

AI for PMs – Meet Your AI Co-Pilot, ChatGPT

01

Why ChatGPT?
- ChatGPT is a Large Language Model (LLM) that generates human-like text.
- Largest AI tool by market share (55%) with many useful/mature features.
- Think of it as an AI-powered assistant for PM workflows.

02

How Does ChatGPT Work?
- ChatGPT generates responses based on probability and pattern recognition in text.
- It doesn't "think" like a human—it predicts the most likely next word or phrase.
- The quality of its output depends on the clarity of the prompt.

03

Why is ChatGPT Useful for Product Managers?
- Automates time-consuming tasks like content analysis and creation.
- Helps structure complex ideas, generate new perspectives, and analyze data.
- Acts as an on-demand thought partner to refine ideas and improve decision-making.

04

How Do We Interact with ChatGPT?
- Prompts = instructions that tell ChatGPT what to do.
- Better prompts → better responses.
- PMs can customize prompts to fit their workflows.

Prompt Engineering Techniques
Quick Video From Microsoft on prompt engineering - Link

Technique	How It Helps	Bad Prompt ❌	Better Prompt ✅
🎭 Role-Based Prompting *(Tell AI to act like an expert)*	AI gives more relevant and context-aware responses	"Write a Jira ticket for a new feature."	"You are a Senior PM at Zonda. Draft a Jira ticket for a feature that allows users to save their preferred floor plans. Follow standard user story formatting."
📚 Few-Shot Prompting *(Show AI good examples first)*	AI follows patterns instead of guessing	"Write release notes for our latest update."	"Here are two examples of past release notes: (1) 'New Search Filters: Users can now filter home listings by price range.' (2) 'Enhanced Floor Plans: Added the ability to compare layouts.' Now, generate a release note for our new mortgage pre-approval feature."
🏗️ Chain-of-Thought Prompting *(Make AI explain its reasoning step by step)*	AI justifies decisions instead of giving a blind answer	"Prioritize these three features for our next release."	"Prioritize these three features. Explain your reasoning step by step, considering business impact, user demand, and technical feasibility."
📝 Summarization & Reformatting *(Turn messy data into useful summaries)*	AI structures information instead of giving a generic response	"Summarize our customer feedback."	"Summarize this customer feedback in 3 sections: (1) Pain points, (2) Feature requests, (3) Positive feedback. Format each as a bullet-point list."

Applying AI to Real PM Workflows at Zonda

"I hear and I forget.
I see and I remember.
I do and I understand."
- Confucius

How We Used AI to Prioritize Today's Topics

01

Analyzing the Survey Responses with ChatGPT

We collected raw responses from PMs about where AI could help the most. Instead of manually sifting through responses, we used ChatGPT to identify and prioritize common themes in the data.

02

Chat GPT In Action

" Below I will paste survey responses from PMs about where AI can help them in their workflows and tasks. Review and suggest the 3 highest-impact AI applications ...?"

- [Video of process in action.](#)

03

Here's What We'll Focus on Today

- AI-Generated Release Notes
- AI-Powered Prioritization Frameworks

Hands-On Workshop 1 – AI-Generated Release Notes

01

Access ChatGPT & Open the Worksheet

📌 Navigate to ChatGPT in your web browser.
📌 Open the provided worksheet ("Worksheet 1").
📌 Review the "Bad vs. Good Prompt" examples before starting.

02

Paste All Three Jira Tickets into ChatGPT

📝 Copy & paste all three sample Jira tickets from the worksheet at once.
📝 Use the "Good Prompt" from the worksheet to structure the response.
📝 Ensure the AI organizes each release note properly.

03

Review & Improve the AI Output

🔍 Analyze the AI-generated release notes.
🔍 Look for formatting issues, missing details, or unclear descriptions.
🔍 Refine the prompt by adjusting tone, structure, or detail level.

Hands-On Workshop 2 – AI-Powered Prioritization Frameworks

01

Access ChatGPT & Open the Worksheet

📌 Navigate to ChatGPT in your web browser.
📌 Open the provided worksheet ("Worksheet 2").
📌 Review the "Bad vs. Good Prompt" examples before starting.

02

Upload the CSV Files into ChatGPT

📝 Upload the two provided CSV files starting with "W2" into ChatGPT
📝 Use the "Good Prompt" from the worksheet to structure the data.
📝 AI will automatically extract themes & align features with business goals.

03

Apply a Prioritization Framework & Review Results

📊 Choose a prioritization framework and use prompt.
📊 Review & adjust AI's prioritization output.
📊 Compare results across different frameworks.

DO THE BEST YOU CAN UNTIL YOU KNOW BETTER. THEN WHEN YOU KNOW BETTER, DO BETTER.

MAYA ANGELOU

Best Practices, Next Steps, Final Thoughts

04

Best Practices for PMs Using ChatGPT & LLMs

01 Start with a Clear Objective 🎯

🎯 Define what you need from AI before prompting.
🎯 Example: Instead of "Use AI for everything," specify "Summarize user feedback into key themes."

02 Use Structured Prompts for Consistency 📝

📝 Vague prompts lead to vague responses—be specific.
📝 Example: Instead of "Write release notes," use "Generate a structured release note using this Jira ticket." – Better yet, provide an example!

03 Validate AI Outputs & Avoid Blind Trust 🔍

🔍 LLMs can generate incorrect or misleading information.
🔍 Always double-check AI-generated release notes for accuracy before publishing.
🔍 Don't use external LLMs for confidential information.

04 Guide the AI & Iterate for Precision 👥

👥 If the first response isn't perfect, refine it.
👥 Example: If AI's feature prioritization doesn't align, adjust the prompt and give more context.
👥 Once you find a prompt that works, save it. Or better yet create a custom GPT for future use.

When Should PMs Use AI?

✅ Use AI When:

✔ **You need speed & scale. AI can analyze thousands of data points in seconds.**
- *Example: AI-generated customer sentiment reports from open-ended survey responses.*

✔ **The task is repetitive & structured. AI works best when there's a clear pattern.**
- *Example: AI auto-formatting Jira tickets into structured release notes.*

✔ **AI can surface insights faster than manual analysis.**
- *Example: AI detecting trends in feature requests across multiple sources.*

🚫 Stick to Traditional Methods When:

❌ **The task requires high-level strategy & vision. AI lacks deep intuition & business context.**
- *Example: Deciding long-term product roadmaps based on market trends.*

❌ **There's high risk in errors. AI-generated insights must be validated before acting.**
- *Example: Customer impact assessments for major feature rollouts.*

❌ **You need qualitative judgment beyond raw data. AI struggles with nuanced decision-making.**
- *Example: Competitive landscape analysis that requires subjective evaluation.*

How PMs Can Stay Ahead in AI

📰 **Follow AI & Product Blogs (My top three)**
- **Lenny's Newsletter / Podcast -** https://www.lennysnewsletter.com/
- **Product Hunt -** https://www.producthunt.com/
- **TLDR AI -** https://tldr.tech/ai

🛠️ **Experiment, Share, & Iterate with Your Team**
📌 **AI is most valuable when tested and refined through real PM tasks.**
- *Example: Try ChatGPT for meeting summaries or customer sentiment analysis, then share what works.*

💡 **Create a shared doc or Slack channel to exchange AI tips, prompts, and best practices.**

You don't need to know everything—stay curious & experiment!

Key Takeaways

01 AI enhances, but doesn't replace PM decision-making.
- Use AI to accelerate workflows, but strategic decisions still need human judgment.

02 The power of ChatGPT comes from structured prompts.
- Be specific—clear inputs lead to valuable outputs.

03 Focus on the end goal – solving customer pain points.
- Experiment, refine, and collaborate to solve customer problems while driving business goals.

Thank You!
What Questions do you Have?

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