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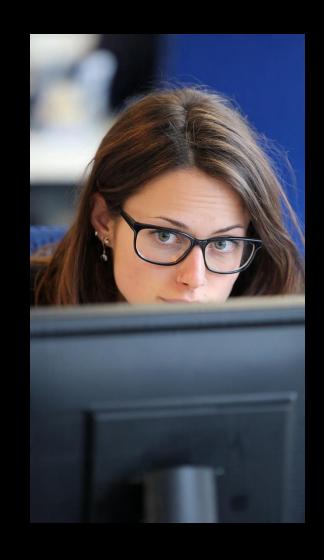




She has a secret.

- She's uploading the client's order history and current inventory to an AI.
- She's getting in stock product recommendations that match the client's buying history in seconds.
- Her conversion rate is up 30% in three months.

Welcome to the world of Shadow AI.



Why the secrecy? Fear.

THE WALL STREET JOURNAL.

ECONOMY | JOBS

Tens of Thousands of White-Collar Jobs Are Disappearing as AI Starts to Bite





Home > Economy & Politics > Brett Arends's ROI

BRETT ARENDS'S ROL

Opinion: Don't believe the skeptics.
Al is coming for your job. Plan now.

AI Is Wrecking an Already Fragile Job Market for College Graduates

Companies have long leaned on entry-level workers to do grunt work that doubles as on-the-job training. Now ChatGPT and other bots can do many of those chores.

The reality of Shadow AI

- Invisible personal productivity jumps
- Not translating to firm productivity
- Happening at your company



The numbers are shocking

57%

Of employees admit to using AI non-transparently

- Presenting Al content as their own.
- Hiding AI tool usage
- Completing work without revealing methods



Source: "Trust, attitudes, and use of artificial intelligence" report by KPMG and U of Melbourne, 2025. Page 75

Why don't they tell you?

They are being rational, not dishonest



What does it mean to Lead AI?

Clearly Communicate your philosophy about Al and productivity gains

Ensure that
performance
measurement systems
account for Al
productivity gains

Ensure that everyone has adequate training on how to use AI effectively and safely

As use cases emerge, analyze the end-to-end business process to add value company-wide You are not deciding whether or not your company is going to incorporate AI...

...you are deciding whether to lead the transformation or let it evolve in the shadows.

What you need to know about Generative Al

An accelerated primer



You don't need to become and expert.

However...

you do need to understand some basics.

eta Al

enAl

itGPT







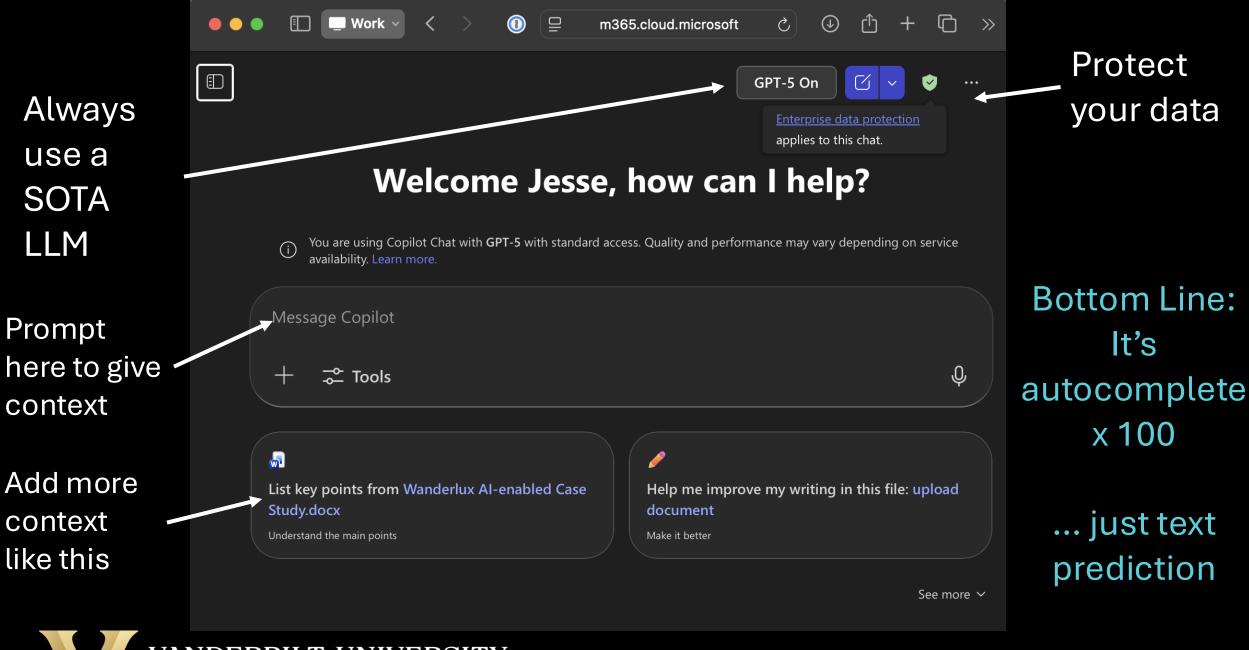
Some definitions/vocabulary to level set.

LLM: Large Language Model. A specific model that generates content (GPT-5, Claude Sonnet 4.5, Gemini Flash 2.5) of AI involving the generation of a variety of content (text, images, video, audio, etc.)

Agent: A group of LLMs using tools to perform more complex tasks.
(Confusingly, an Agent can also be just one LLM)

GPT: Generative Pretrained Transformer (an LLM). (confusingly, a "GPT" is also a pre-configured chatbot.) Al: Broad field including
Machine Learning,
Reinforcement
Learning, Generative Al,
Agentic Al and more.

Agentic AI: A field of AI exploring how to best create useful and reliable Agents.



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LLM

How to think about LLMs

An LLM does not give you expertise, it gives you *infinite interns*.

LLMs are fundamentally probabilistic, not deterministic. This makes automation hard.

The most popular coding language may soon be English.

If all you are doing is taking someone else's words and pasting them into an LLM, you're not adding value.

LLMs are about coherent text, not truthful answers. Expect hallucinations to continue.

Experiment with LLMs because their capabilities are defined by a jagged frontier

Context 101: There is always context, even if you do not provide context.

- LLMs are **not** random number generators.
- Try generating an image of a watch showing 7:00.

Less Context Given =
More Context Assumed



Training Data vs Context: What's the difference?

Training Data

- Has a cut off date, after which LLM "knows" nothing.
- Will be used to fill in assumptions.
- "The Internet"
- Can be over-ridden, ignored, or built upon.

Context

- Exists for current session only, then forgotten.
- Can disappear if context window limit exceeded.
- Has "priority" when LLM generates a response.

Constraints 201: Context "Engineering" More context = better outcome.

In your prompt:

- Personas and audience
- Background knowledge
- Tone
- Guardrails: "If you don't know the answer, say that you don't know."
- Flipped Interaction

Documents:

- Vetted, accurate documents to use as source for the response.
- Writing samples or formatting to match.
- Internet search

Use Cases

A brief crash course on what you could be doing

(and some of your employees are already doing) with Al

From Shadow AI to Strategic Advantage

Where are you? Where should you be going?

STAGE 1: Individual Experimentation

- Your employees are already doing this—mostly in the shadows
- Free tools (ChatGPT, Claude), no coordination, mixed results
- Reality: Some people 2x more productive. You don't know who or how.

STAGE 2: Organizational Foundation

- Approved tools with security (Microsoft Copilot, Claude for Enterprise)
- Everyone trained to baseline capability
- Light governance (what's OK, what's not)
- Opportunity: 50-70% of workforce benefits, not just early adopters

STAGE 3: Strategic Integration

- Al integrated into core workflows and business decisions
- Custom approaches for your specific problems
- The differentiation: Not just more efficient—more capable

STAGE 1: Individual Experimentation

Things your employees could start doing tomorrow (or are already doing...)

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Stage 1: Generate Marketing Copy in Seconds

The Problem:

- Writing product descriptions takes time
- Social media posts need constant creation

The Solution:

- Al identifies an object by photo, generates descriptions
- Create multiple social media variations
- Done in 60 seconds



What type of plant is this?



Analysis 💙

That plant is Russian Sage.

Its current scientific name is **Salvia yangii**, although it was formerly known as **Perovskia atriplicifolia**.

Key characteristics that match the image are:

- Flowers: Airy, spike-like clusters of small, typically lavender-blue to violet flowers.
- Foliage/Stems: Finely textured, gray-green leaves and square, silvery-gray stems, giving the
 plant an overall silvery or wispy appearance.

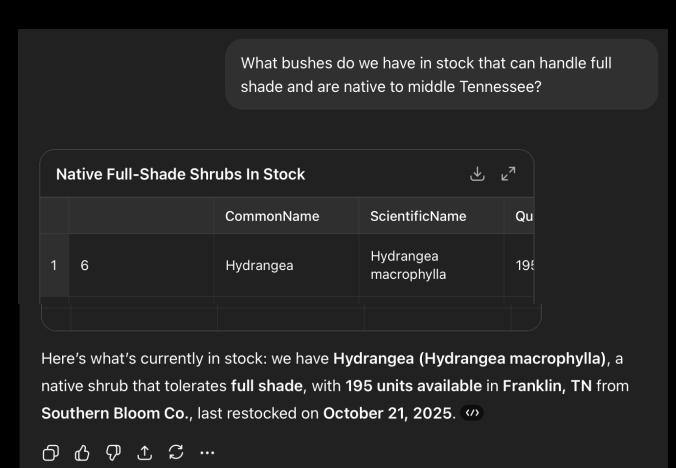
Stage 1: Answer Inventory Questions Instantly

The Old Way:

- Look through catalogs
- Check inventory systems
- Call warehouse
- Maybe 15-20 minutes

With Al:

- Upload catalog and inventory data to ChatGPT
- Ask the question in plain English
- Answers in seconds



Note: This example generated with synthetic data. The ability to perform this analysis is dependent on clean, complete, relevant data sources. If a human doesn't have enough information to answer the question, AI will not be able to do it either.



What can you do when you coordinate?

This is where you start creating value systematically.

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Stage 2: Solve the "key person" problem

The Problem:

- Only Sarah knows how to do that.
- John is retiring!? What?
- If Maria leaves, we're screwed.

The Solution:

- Record interview/demo with key person (audio or video)
- Upload to Claude with any other supporting documents
- Employees can "chat" with "Sarah".

The Benefits:

- Knowledge preserved.
- Faster onboarding of new employees
- Key person can focus on higher-value work, not repeating answers to questions.





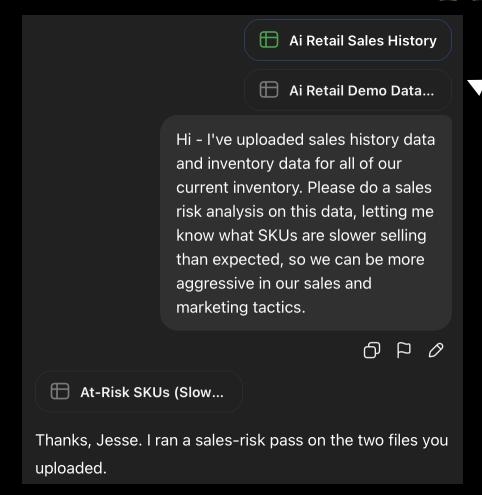
Stage 2: Stop dead stock before it happens

The Problem:

 You're stuck with 500 units of a plant that didn't sell.

The Solution:

- Upload inventory, historical sales data, seasonal patterns.
- Al identifies slow-movers early.
- Proactive markdowns, bundles to minimize losses



There are integrations to various enterprise data sources, to avoid manual uploads, etc.



Note: This example generated with synthetic data. The ability to perform this analysis is dependent on clean, complete, relevant data sources. If a human doesn't have enough information to answer the question, AI will not be able to do it either.

Here is where it might feel like magic

Where AI becomes a competitive advantage

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Stage 3: SKU Rationalization

The Problem:

- You have 47 varieties of hostas
- Many are similar
- Some barely sell
- Managing all of them is expensive (inventory, catalog space, confusion)
- But which ones should you cut?



The Al Approach:

Upload to Claude: 3-5 years of sales data by SKU

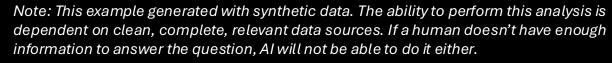
- Product descriptions
- Customer purchase patterns
- Margin data
 Ask: "Which SKUs are redundant or underperforming? What should I rationalize?"

Stage 3: SKU Rationalization

Al Performs Analysis:

- Sales volume and trends by SKU
- Margin analysis
- Similarity clustering (which ones are nearly identical?)
- Customer impact assessment (if we drop X, do customers have alternatives?)

```
2 # Compute sales volume and margin per SKU
 3 sales_summary = sales_data.groupby("SKU")["Units_Sold"].sum().reset_index()
 4 sales_summary["Avg_Units_Monthly"] = sales_summary["Units_Sold"] / months
 6 # Merge for full dataset
 7 sku performance = sales summary.merge(sku summary, on="SKU")
9 # Identify underperformers and redundant SKUs
10 low_sales = sku_performance["Units Sold"] < np.percentile(sku_performance["Units Sold"], 25)
11 low_margin = sku_performance["Avg_Margin_%"] < np.percentile(sku_performance["Avg_Margin_%"], 25)
12 sku performance["Flagged"] = np.where(low sales | low margin, "Yes", "No")
14 # Calculate rationalization suggestion
15 to_cut = sku_performance[sku_performance["Flagged"] == "Yes"]
16 to_keep = sku_performance[sku_performance["Flagged"] == "No"]
18 # Summary stats for before/after rationalization
19 summary = pd.DataFrame({
       "Metric": ["Total SKUs", "Avg Units Sold", "Avg Margin %", "Total Revenue ($M)"],
20
21
      "Before": [len(sku_performance),
                 sku_performance["Units_Sold"].mean(),
                 sku performance["Avg_Margin_%"].mean(),
23
24
                 sku_performance["Total Revenue"].sum()/1e6],
      "After": [len(to_keep),
25
                 to keep["Units Sold"].mean(),
27
                 to_keep["Avg_Margin_%"].mean(),
28
                 to_keep["Total_Revenue"].sum()/1e6]
29 })
```





Stage 3: SKU Rationalization

The Output:

- Specific SKUs to discontinue
- Replacement recommendations
- Expected impact on revenue/ margin/ complexity

		<pre>random sample of rows = data.sample(n=20)</pre>	from the dataframe	e `data`				+	
	sku	Description	Total Units Sold	Avg Margin (%)	Cluster	Revenue (\$K)	Gross Margin (\$K)	Flagged	
4	HST-005	Gold Hosta, Small leaf	6632	45.4	6	117.8	53.5	No	113
20	HST-021	White Hosta, Medium leaf	2654	47.0	3	34.1	16.0	Yes	1
42	. HST-043	Variegated Hosta, Large leaf	406	32.6	3	7.1	2.3	Yes	
27	' HST-028	Gold Hosta, Medium leaf	2973	60.9	6	67.7	41.2	No	
18	HST-019	Variegated Hosta, Large leaf	7415	29.3	7	136.2	39.9	Yes	
19	HST-020	Blue Hosta, Large leaf	4798	64.6	3	111.5	72.0	No	
5	HST-006	Variegated Hosta, Small leaf	4674	65.4	7	105.5	69.0	No	
33	HST-034	White Hosta, Medium leaf	4040	26.0	4	97.4	25.3	Yes	
14	HST-015	Gold Hosta, Small leaf	6159	60.4	2	109.3	66.0	No	
46	HST-047	Gold Hosta, Small leaf	7235	21.8	3	150.6	32.8	Yes	
36	HST-037	White Hosta, Large leaf	702	36.2	5	10.2	3.7	Yes	
45	HST-046	White Hosta, Small leaf	7921	34.2	7	167.6	57.3	No	
24	HST-025	White Hosta, Small leaf	6442	25.5	5	147.2	37.5	Yes	
11	HST-012	Green Hosta, Small leaf	3299	34.5	2	44.3	15.3	No	
34	HST-035	Blue Hosta, Medium leaf	1228	36.9	3	30.2	11.1	Yes	
29	HST-030	White Hosta, Medium leaf	5256	20.3	3	114.5	23.2	Yes	
13	HST-014	Blue Hosta, Small leaf	400	66.5	4	9.9	6.6	Yes	
7	HST-008	White Hosta, Medium leaf	3761	40.5	1	79.1	32.0	No	
0	HST-001	White Hosta, Large leaf	6936	25.4	1	105.6	26.8	Yes	
37	' HST-038	Variegated Hosta, Large leaf	7110	45.9	3	122.9	56.4	No	

"Flagged" column indicates whether the SKU should be removed or not.



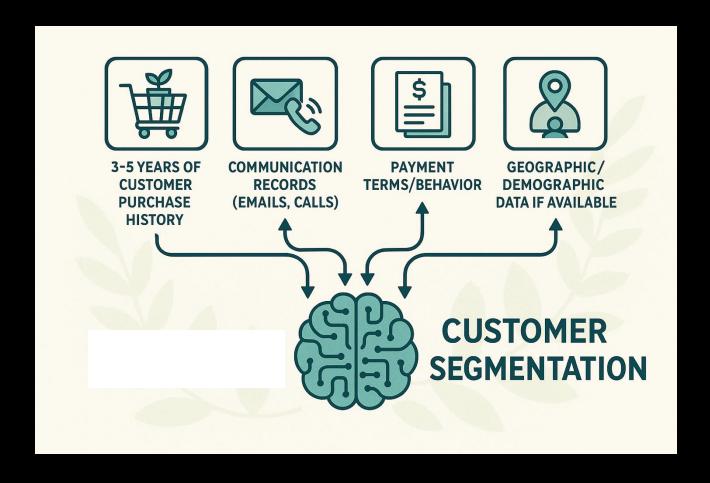
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Stage 3: Know Your Customer

The Challenge:

- Who are repeat buyers vs onetime purchasers?
- Who buys premium vs bargain hunters?
- Who tries new things vs repeat orders?
- Who buys seasonally vs yearround?

The Al Approach:



Stage 3: Know Your Customer - Results

The Premium Landscape Partners

Large regional nurseries and landscape contractors who supply or install high-end residential or commercial projects. They prioritize plant quality, unique varieties, and reliability over cost.

Key Traits:

- Purchase consistently across the year, especially in spring and early fall.
- Willing to pay premiums for mature plants, branded cultivars, or guaranteed delivery timelines.
- Expect data-driven inventory forecasts and transparent supply chain communication.
- Often engage directly with growers to plan seasonal availability.

Al Insights Use:

Al can identify these buyers by high order values, recurring contracts, and purchase of rare or premium SKUs.

The Independent Garden Innovators

Independent garden centers and boutique nurseries that differentiate through unique offerings, niche plant types, and personalized customer experience.

Key Traits:

- Smaller but frequent orders with diverse SKUs.
- Tend to experiment with new or exotic plant varieties.
- Often combine ornamental plants with lifestyle products (pots, décor).
- Rely on local/regional supplier relationships.

Al Insights Use:

Al can detect this group through purchase diversity, high SKU turnover, and early adoption of new product lines.

Note: This example is hypothetical. The ability to perform this analysis is dependent on clean, complete, relevant data sources. If a human doesn't have enough information to do this analysis, AI will not be able to do it either.

Stage 3: Competitive Intelligence

The Challenge:

- What are competitors stocking?
- What are they promoting?
- What gaps exist in the market?
- Where can you differentiate?

Traditionally: Spend hours manually checking websites, social media, etc.

The Al Approach:

Using Deep Research, give AI:

- Competitor websites
- Their social media accounts
- Industry forums/ discussion boards

Al researches:

- Featured products
- Price points
- Customer sentiment
- Gaps in their offerings

Output:

- Competitive overview
- Differentiation opportunities
- Gaps you could fill
- Strategic positioning recommendations

Example: "Competitors are all focused on native plants. Social media shows rising interest in exotic ornamentals that are cold-hardy."

Note: This example is hypothetical. The ability to perform this analysis is dependent on clean, complete, relevant data sources. If a human doesn't have enough information to do this analysis, Al will not be able to do it either.

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One more use case: bring it all together

So far, we've seen AI help with:

- Sales support
- Marketing and product descriptions
- Customer segmentation
- Operational support
- Inventory management
- Knowledge management
- Competitive intelligence



Stage 3: AI-powered Production Planning

Current Approach:

- Look at last year's sales
- Factor in gut feel
- Talk to a few key customers
- Make your best guess

The Stakes:

- Grow too much of the wrong thing → Dead inventory, lost money
- Grow too little of the right thing → Missed revenue, disappointed customers

Al Approach:

Combine ALL your data:

- 5+ years of historical sales by SKU
- Customer purchase patterns and segments
- Market trend analysis (social media, housing, landscaping trends)
- Competitor intelligence
- Regional climate considerations
- Your unique customer mix

Ask Al: "What should our production plan be for next season? Where should we invest? What should we reduce?"

Stage 3: AI-powered Production Planning

The Impact:

This isn't just efficiency. This is strategic advantage.

- Make better decisions than competitors who are using gut feel
- Reduce costly mistakes (dead inventory, missed opportunities)
- Capitalize on emerging trends before they're obvious
- Align production with YOUR specific customer base

Human + Al:

- This is not automation. You're not delegating major decisions to Al
- Al is your researcher, your thought partner, and master idea generator



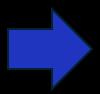
This sounds great. Why isn't everyone doing it?

I don't have time for this.



Your competitors are moving already. Its time.

My team won't adapt to new technologies.



They already are. They're just not telling you.

This sounds expensive.



Stages 1 is free. Stage 2 is minimal cost. Then decide if it is worth further investment.

I don't know where to start.



That's what I'm here for.

What you should do this week.

Have the conversation. Talk to your leadership team about your AI philosophy. What's the plan?

Pick one use case that resonates. One of mine or one your team is already doing.

Make it into a pilot project.

Do basic training. Get everyone to baseline capability. Then encourage experimentation

Ask the questions. Pull aside 3-5 employees and ask them what AI tools they are using and how.

Set up approved tools.

Copilot or Claude or GPT or something else. This communicates commitment.

You don't have to boil the ocean. Just start moving.

Your competitors are figuring this out.

Some already have.

Here is what I know.

- Someone in your organization is already using Al in the shadows.
- Some of your competitors are already at Stage 2.
- The gap between leaders and laggards is growing.

Here is what you control.

- How fast you move from Stage 1 to Stage 2 to Stage 3.
- Whether you capture productivity gains from AI or not.
- Whether you lead this transformation or watch it happen to you.

The opportunity is real.

Let's talk.

I'd love to talk to you more about bringing AI out of the shadows of YOUR organization



www.augmented-intelligence.co jesse@augmented-intelligence.co







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A quick and biased guide to GenAI Models

ChatGPT: Excellent general use model. Very good at Deep Research, Data Analysis (Code Interpreter), Agents (called GPTs), A huge variety of "connectors" to other oft-used applications. Good at image rendering.

Claude Sonnet: Excellent general use model. Very good at Deep Research, Best for Coding, Best writer, excellent "project" function (compartmentalized context). A huge variety of "connectors" to other oft-used applications.

Google Gemini: Good general use model. Very good at Deep Research. Best for Image recognition, video recognition, good at image production. Also check out NotebookLM, which is like Claude Projects.

Meta.ai: Focused on image and video production and quite good at both.

runway: Amazing at images, video, creative, must have for marketing or any creative work.

Copilot: Runs ChatGPT under the hood, Microsoft native and good connections to Microsoft product but less added functionality than ChatGPT (no Deep Research, Code Interpreter).

Image disclosure:

- No stock images were used in this presentation
- Screenshots (computer code, logos, AI transcripts) were made by the author.
- Vanderbilt campus shot courtesy of Vanderbilt Photography
- Plant photo is an open source picture found in Google Images
- All other images were generated using Al

Al tools used/disclosure:

- Content: Claude Sonnet 4.5 and ChatGPT 5.0 (both Pro level)
- Images: meta.ai (free tier) and ChatGPT 5.0 (Pro level)
- Code and Data Analysis: ChatGPT 5.0 (Pro level)
- Plant identification: Google Gemini 2.5 Flash (free tier)

THEME FONTS AND COLORS

FONTS COLORS

Headings: Garamond BOLD (50 pt)
All caps / Character Spacing = Tight

Subheads: Apex New Book or Light (24 pt)

Bullet Points and Large Statements: Apex New Book or Light (24 pt or smaller)

Quote Style: Adobe Garamond Pro Bold Italic or Garamond Bold Italic (28 pt)

