№ 01

Some jobs will *be lost*.
Many jobs will *be created*.
Every job will be *affected*.

The third line is the one that matters. It is also the one most leaders, and most strategies, quietly leave out — and the one this notebook is organized around.

JENSEN HUANG · NVIDIA

№ 02 / a framework for matching problems to ai

The AI Decision *Spectrum*

How different AI systems think — and how to match a business problem to the thinking style that suits it. Three positions on a single spectrum, each with a distinct posture toward determinism, explainability, and control.

№ II Anatomy of the Spectrum

three positions, one axis

01

Determinism · Rules

DETERMINISTIC AI

The Rules Engine

Same input → same output.

Compliance and control. The system answers the same question the same way every time, and shows its work — auditable, predictable, transparent by construction.

> *A deterministic system answers a closed question. The hard part is being sure you've asked the right one.*

KEY TRAIT — TRANSPARENT · AUDITABLE · PREDICTABLE

IN PRACTICE

- GPS navigation systems
- Regulatory compliance engines
- Automated invoice processing
- Traditional fraud detection

02

Pattern · Probability

HYBRID AI

The Pattern Engine

Learns patterns → applies consistently.

Analysis and optimization. The system learns from data and applies what it learns at scale, with enough explainability to defend the decision afterward.

> *Hybrid systems are how most production AI actually earns its keep — quiet, consistent, behind the scenes.*

KEY TRAIT — ADAPTABLE · EXPLAINABLE · SCALABLE

IN PRACTICE

- Credit scoring models
- Medical imaging diagnosis
- Document classification
- Supply chain forecasting

03

Generation · Open-ended

NON-DETERMINISTIC AI

The Generation Engine

Same input → many creative outputs.

Innovation and adaptation. The system produces something that didn't exist a moment ago — useful precisely where the problem is open-ended, but unfit for closed-ended ones.

> *Generative models do not answer questions. They draft answers, and leave the choosing to you.*

KEY TRAIT — CREATIVE · FLEXIBLE · CONTEXTUAL

IN PRACTICE

- ChatGPT and large language models
- AI agents and assistants
- Creative content generation
- Personalized customer engagement

№ II.iv STRATEGIC INSIGHT

Every AI investment decision starts with understanding where, on this thinking spectrum, the business problem belongs.

№ 03 / four working categories of ai technology

AI Technology *Categories*

Four categories worth distinguishing in a board conversation, each mapped back to where it sits on the decision spectrum. The labels matter less than the posture each one implies toward risk, audit, and creativity.

№ III Anatomy of the Categories

four categories, one foundation

01

GENERATIVE

Generative AI

Creates new content, designs, and solutions.

Where the deliverable is the artifact itself — a draft, an image, a working block of code. Useful precisely where you can't specify the answer in advance.

APPLICATIONS	Content creation, code generation, marketing materials.
EXAMPLE	ChatGPT writing reports; DALL·E creating images.
SPECTRUM	*Non-deterministic.*

02

PREDICTIVE

Predictive AI

Forecasts future outcomes and identifies trends.

The forecasting layer beneath planning, finance, and risk. Where the question has a number for an answer, and the cost of a wrong number is bounded.

APPLICATIONS	Demand forecasting, risk assessment, financial modeling.
EXAMPLE	Supply-chain demand prediction; credit risk scoring.
SPECTRUM	*Hybrid.*

03

CLASSIFICATION

Classification AI

Categorizes, sorts, and identifies patterns in data.

The quiet workhorse. Most production AI a company already runs — sorting, routing, flagging — sits here, and benefits from being treated as plumbing, not a project.

APPLICATIONS	Document processing, fraud detection, quality control.
EXAMPLE	Email spam filtering; medical image diagnosis.
SPECTRUM	*Deterministic / hybrid.*

04

OPTIMIZATION

Optimization AI

Finds the best solution within defined constraints.

Operations research with new tooling. Where the hard part is encoding the constraints honestly; the optimizer itself is the easy part.

APPLICATIONS	Resource allocation, logistics planning, scheduling.
EXAMPLE	Route optimization for deliveries; workforce scheduling.
SPECTRUM	*Hybrid.*

№ III.v FOUNDATION

All four are powered by machine learning, deep learning, and large language models — different categories, one underlying substrate.

№ 04 / where to deploy ai first

The Strategic Choice *Matrix*

A 2×2 for distinguishing AI moves that compound from those that decorate. Read difficulty against risk, then choose the order of moves — the questions in each quadrant are different, and so are the people who should answer them.

№ IV Anatomy of the Matrix

four quadrants, four conversations

RISK ↑

01 HIGH RISK · LOW DIFF.

QUADRANT I

Compliance & *Control*

Regulated tasks where the cost of getting it wrong outweighs the cost of getting it done.

- Legal contract review
- Compliance checks
- Regulated tasks

02 HIGH RISK · HIGH DIFF.

QUADRANT II

Decision *Support*

High-leverage assistants for analysts and operators. Earn trust before scope.

- Healthcare
- Fraud detection
- Investment analysis
- Software development

03 LOW RISK · LOW DIFF.

QUADRANT III

Quick *Wins*

Where to start. Adoption signals matter more than ambition.

- Invoice processing
- Search
- Basic chatbots
- Recommendations
- Classification
- Unstructured → structured

04 LOW RISK · HIGH DIFF.

QUADRANT IV

Experimental *Plays*

Bets on differentiation. Resource these like a portfolio, not a roadmap.

- Creative content generation
- Customer segmentation
- Marketing personalization
- Customer journey

DIFFICULTY →