

# The 12 mental models

Quick reference from Artificial Leverage by Matthew Jefferies

## 01 The Probabilistic Reasoning Engine

AI is a next-token prediction machine calculating probability distributions. Understanding this transforms how you frame every request and explains why outputs vary.

## 02 The Model Selection Matrix

Dozens of frontier models exist. A rapid selection framework helps you pick the right model for the right job every time, matching capability to task.

## 03 The Alignment Stack

Hidden design decisions shape every model's behaviour. Understanding the alignment stack lets you work with model constraints rather than fight them.

## 04 System 1 and System 2 Thinking

When to activate reasoning mode and when it is expensive overkill. A cost-quality-speed framework for deploying extended thinking strategically.

## 05 AI as the Universal API Layer

Tool use and the Model Context Protocol transform AI from text generation into a connected system that interacts with external software and data sources.

## 06 The Autonomy Spectrum

A five-level framework for calibrating how much autonomy to grant an AI agent, from simple tool use (Level 1) to full delegation for narrow domains (Level 5).

## 07 AI Perception

Every frontier model now sees images, reads documents, and processes audio natively. Understanding what models can and cannot perceive guides multimodal workflows.

## 08 Prompts Are Specifications, Not Requests

The single most important shift: define audience, format, constraints, perspective, and quality criteria explicitly. Specifications produce consistent results.

## 09 The AI Leverage Audit

A four-step framework: map workflow tasks, classify as automate/augment/keep human, prioritise by impact, and design augmented workflows for top opportunities.

## 10 The Task-Model Matching Framework

Match models to tasks across four dimensions: complexity, stakes, volume, and required guarantees. Enables 90-second selection decisions.

## 11 The Data Sensitivity Classifier

A four-tier classification system for deciding what data goes into which models, plus defences against prompt injection in agentic systems.

## 12 The Exponential Mindset

AI capability doubles approximately every seven months. A sustainable monthly practice for updating knowledge and workflows as technology accelerates.

These models form an integrated system. Master all 12 and you have the complete toolkit for working with frontier AI.

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