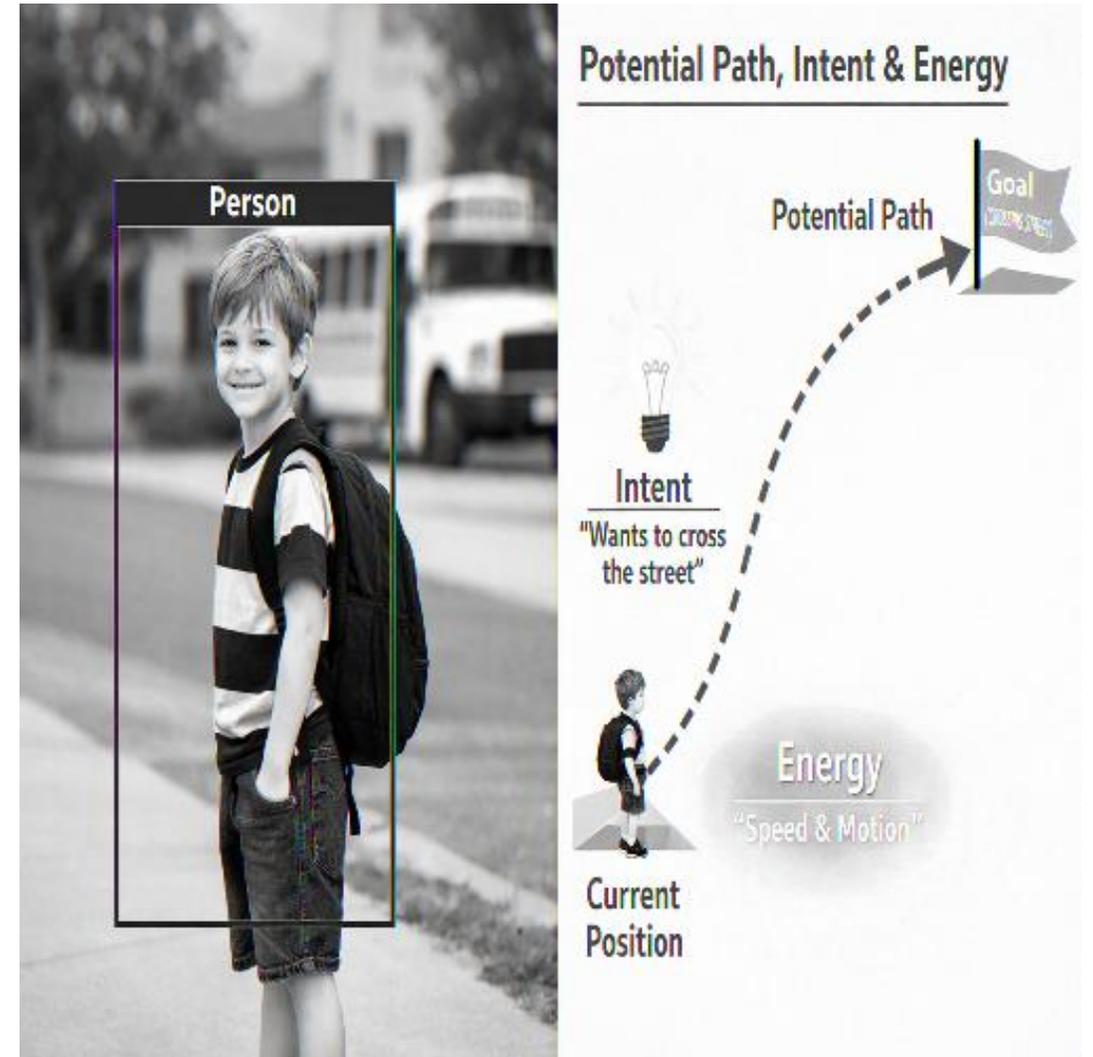
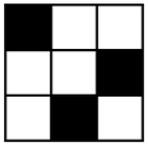


Beyond Object Detection

How Next-Generation AI
Sees “Why” and “What’s Next”

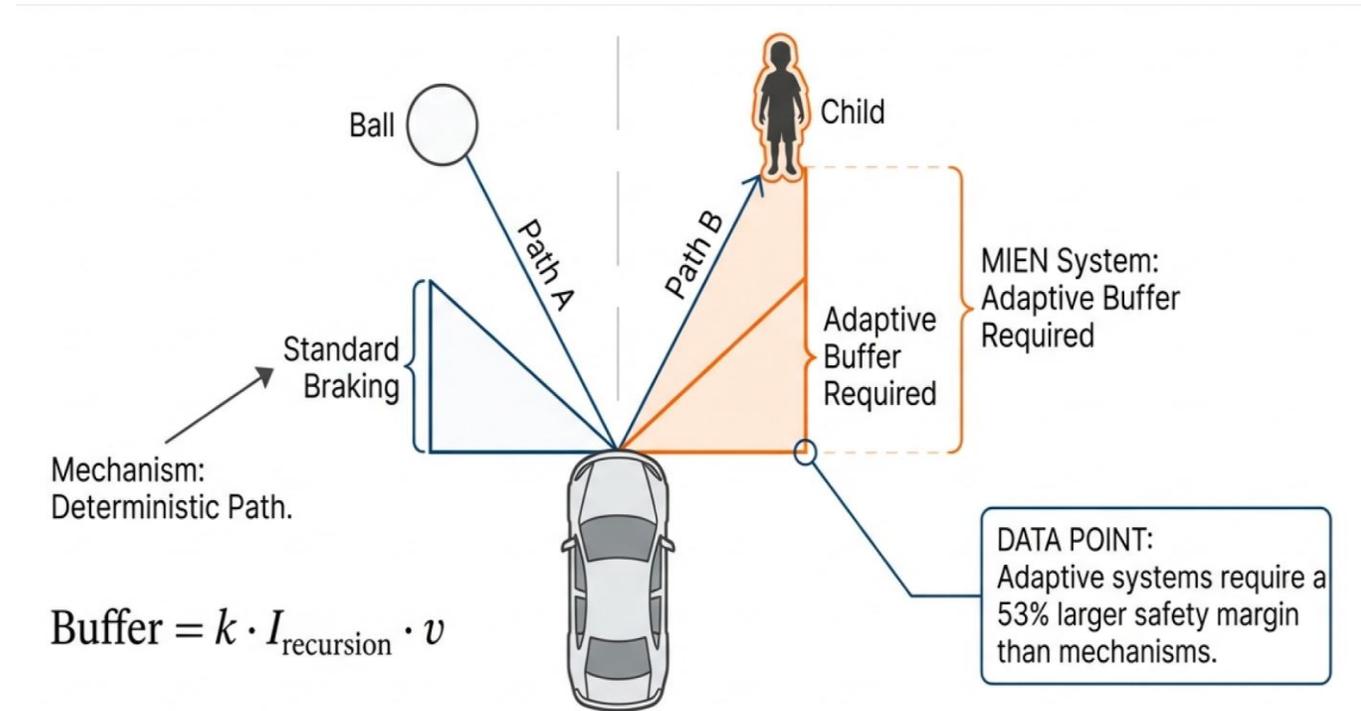
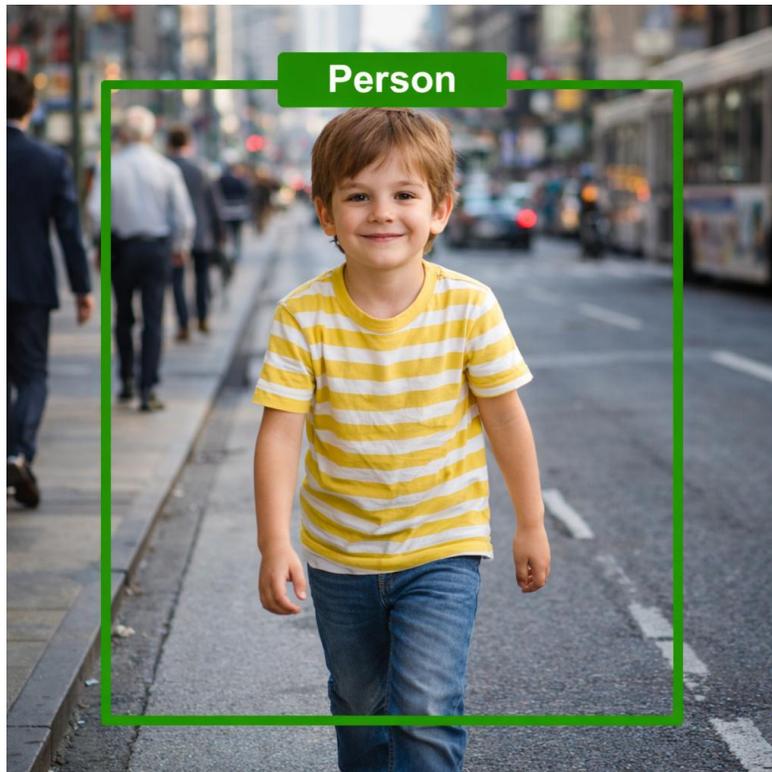
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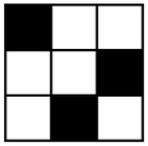




From Seeing Objects to Understanding Situations

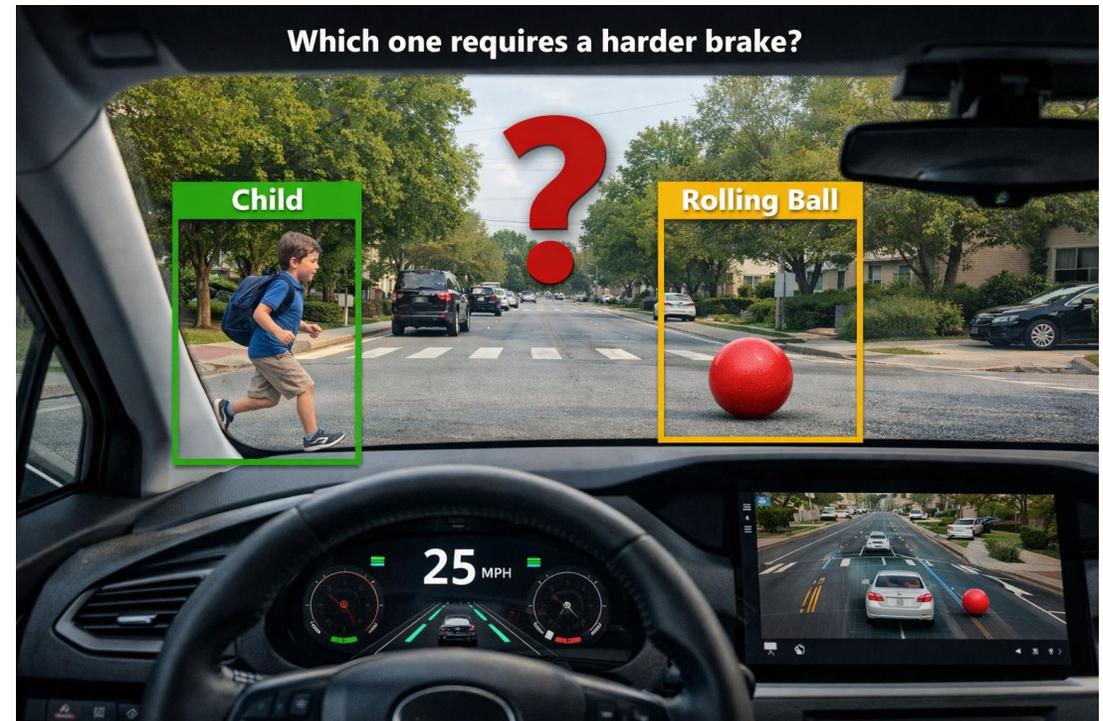
Why telling the difference between a child and a ball changes everything for safety and automation.

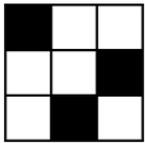




Cameras See "What." They Don't See "Why."

- Today's best AI is great at naming things. It can look at a street and label "Car," "Pedestrian," "Ball," and "Cone."
- **The Gap:** To a standard camera, a child standing by the road and a traffic cone are just two different objects occupying space.
- **The Risk:** The camera doesn't inherently "know" that the child can decide to run into traffic, while the cone will stay put.
- **The Result:** Autonomous systems often react too slowly to unpredictable things or too cautiously to static things.

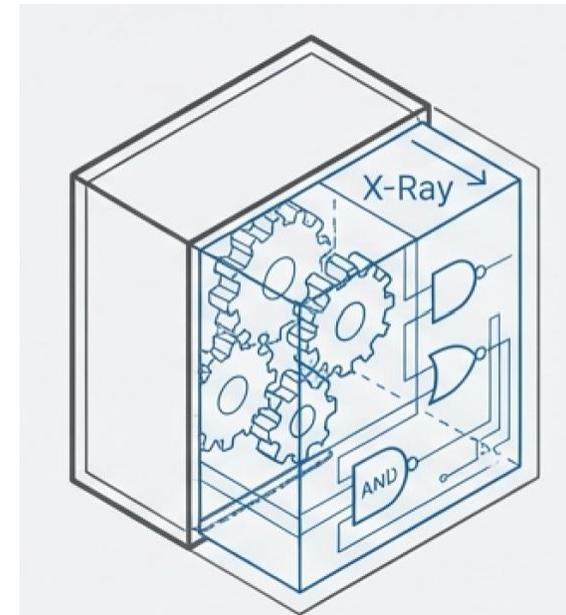


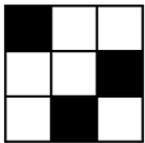


Understanding Behavior, Not Just Shapes

- Our approach goes beyond surface-level pictures. It analyzes the **behavioral potential** of an object.
- It asks three critical questions:
 - 1. **Is it stable?** (Will it stay there?)
 - 2. **Can it adapt?** (Can it change its mind or direction?)
 - 3. **What is driving it?** (Gravity? Motors? A brain?)

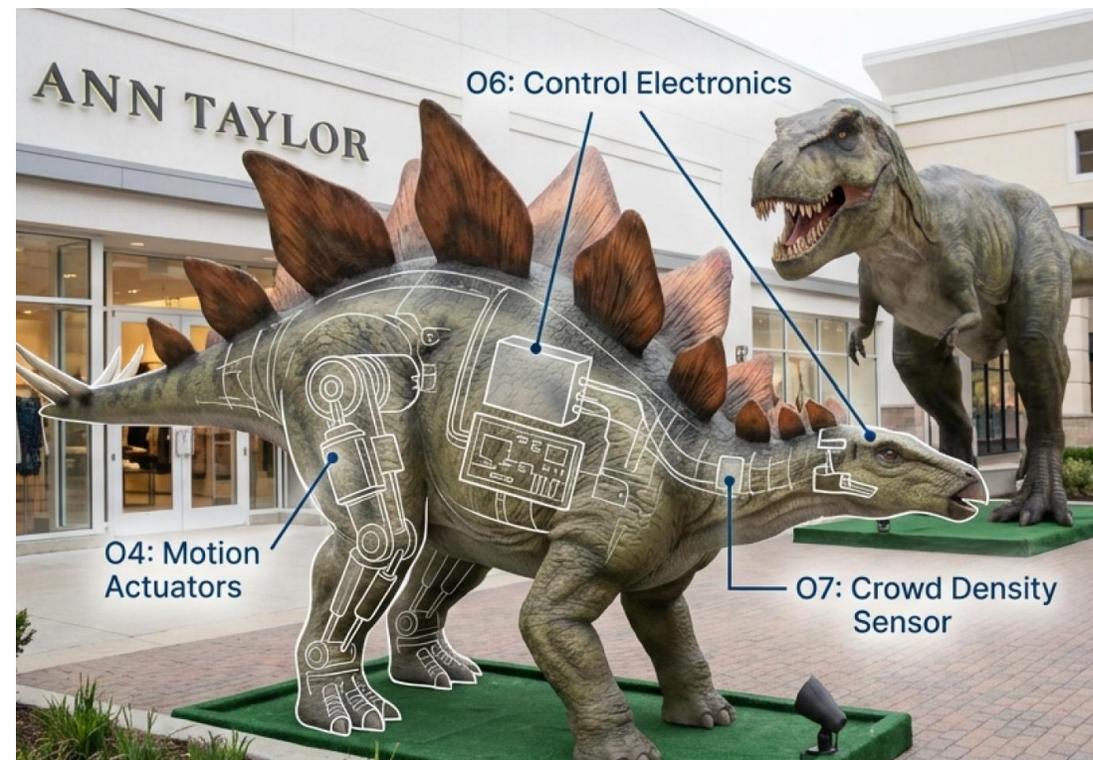
Cameras capture surfaces. 3x3 Logic infers the hidden mechanisms required for behaviors to exist.

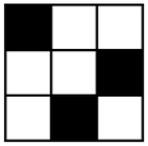




Inferring What Makes It Move

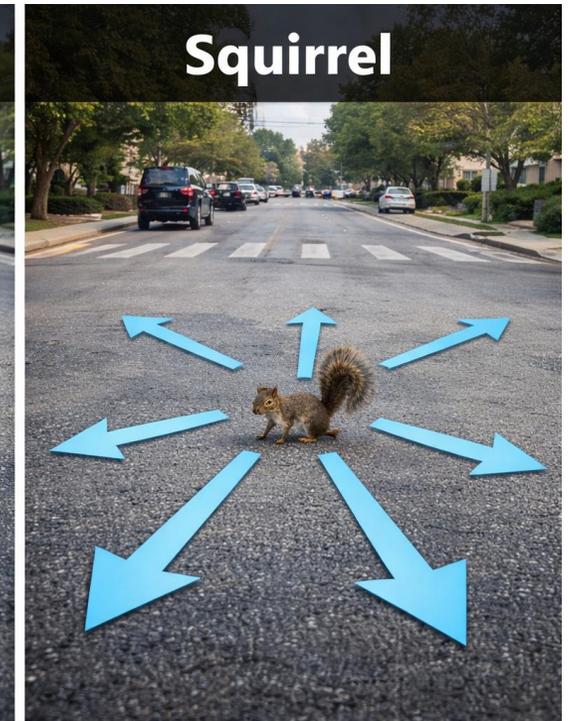
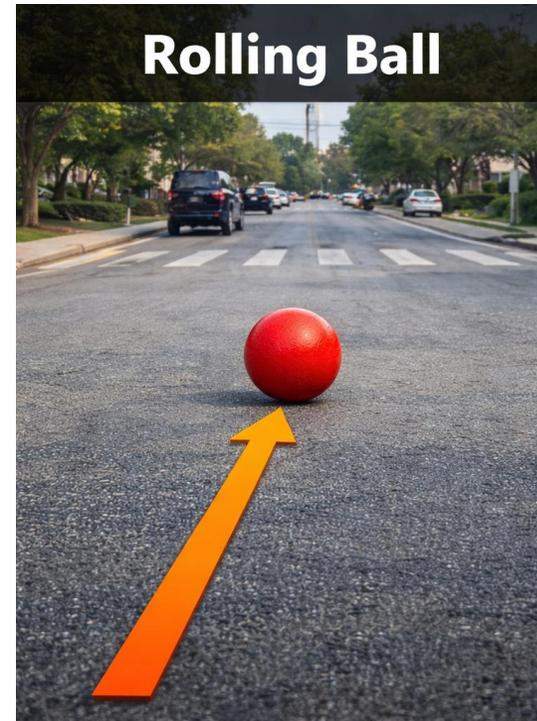
- **The Feature:** The system looks for clues to figure out what is happening *inside* an object.
- **Example (The Robot Dinosaur):** A standard camera sees a “dinosaur statue.” Our system notices the posture and context to realize there are *motors, sensors, and electronics inside*.
- **The Benefit:** It correctly identifies this as a machine that might move suddenly, not a piece of concrete. This prevents misclassifying moving machinery as static obstacles.

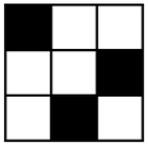




Knowing What Can Change Its Mind

- **The Feature:** The system separates “Adaptive Agents” (things that learn and react) from “Mechanisms” (things that follow simple physics).
- **Example (The Squirrel):** A squirrel climbing a plant isn't just falling; it is balancing, gripping, and reacting to the wind. The system recognizes this "adaptability."
- **The Benefit:** We can assign different safety rules. A ball follows gravity (predictable). A squirrel—or a child—follows its own decisions (unpredictable).

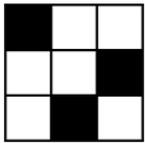




Predicting “When” Instead of Just Seeing “Where”

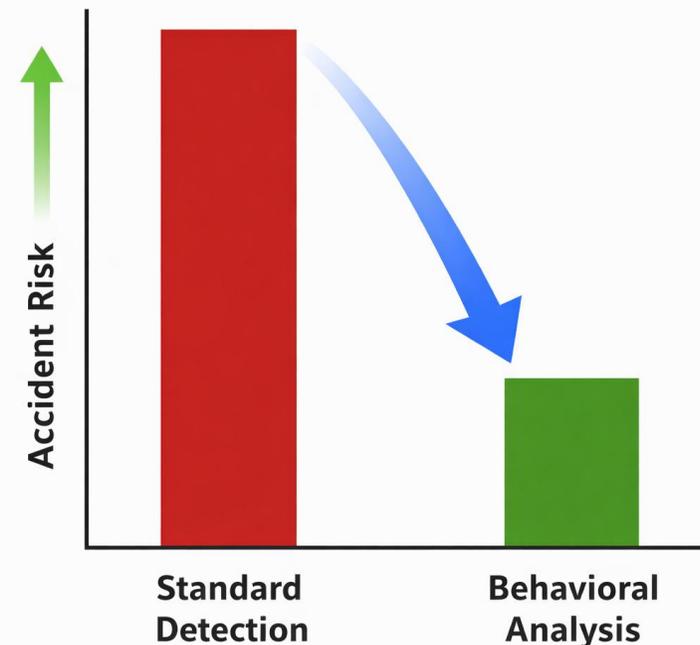
- **The Feature:** By analyzing stability, the system predicts not just where an object *is*, but when it will *fall* or *move*.
- **Example (The Skateboard):** A skateboard resting on a curb edge looks still to a normal camera. Our system calculates that it is "unstable" and predicts it could roll into the street within 50 seconds if the wind blows.
- **The Benefit:** Moving from reactive (braking after the board rolls) to proactive (slowing down *before* the hazard manifests).

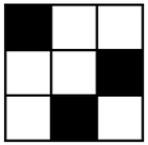




Why This Matters for Safety & Business

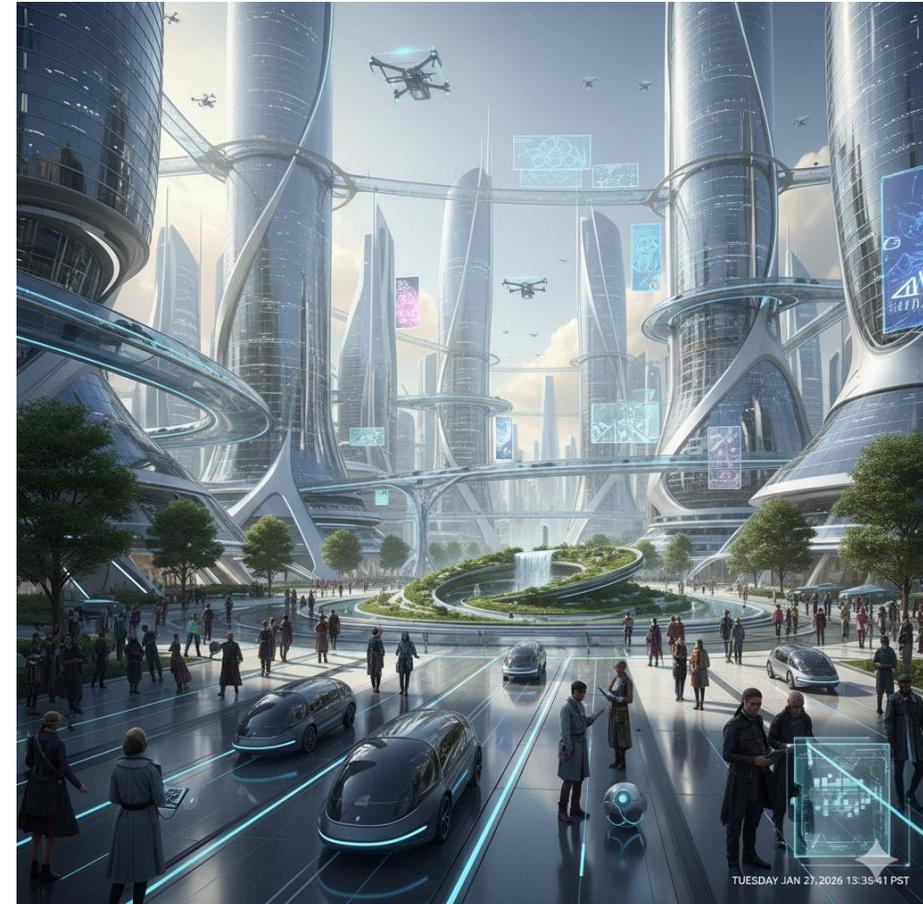
- **Smarter Autonomous Cars:** By treating a child differently than a traffic cone, we can calculate **safety margins that are ~53% more accurate.**
- **Better Security:** Distinguishes between a person loitering (intent) vs. a person waiting for a bus (routine).
- **Advanced Robotics:** Robots can tell the difference between a box they can shove aside and a fragile device they must navigate around.

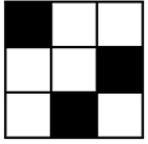




The Future is Predictive

- We are shifting the paradigm from **Labeling** to **Understanding**.
- We don't just see the pixels; we understand the physics and intent behind them.
- The result is AI that thinks more like a human expert and less like a database.





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