



BINA

AI-in-the-loop for online learning

Or Kozlovsky

Nati Kligler

Mark Stauber

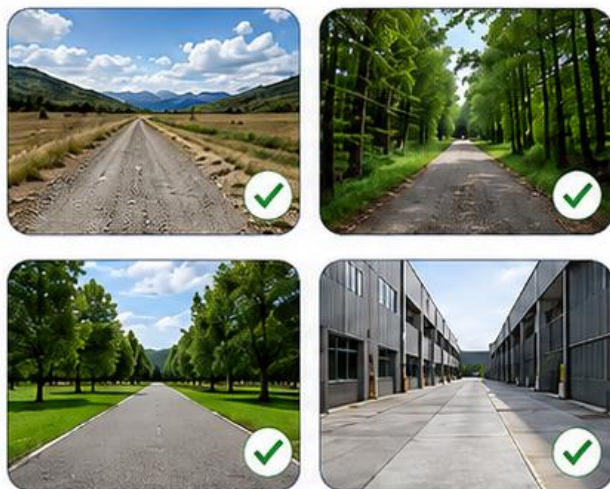


Why Robots Break in the Real World?

Expected Conditions



Example Scenes



Terrain Types



Lighting Conditions



Predictable Objects



Why Robots Break in the Real World?

Supervised Learning / Hand-Engineered Heuristics



Execution

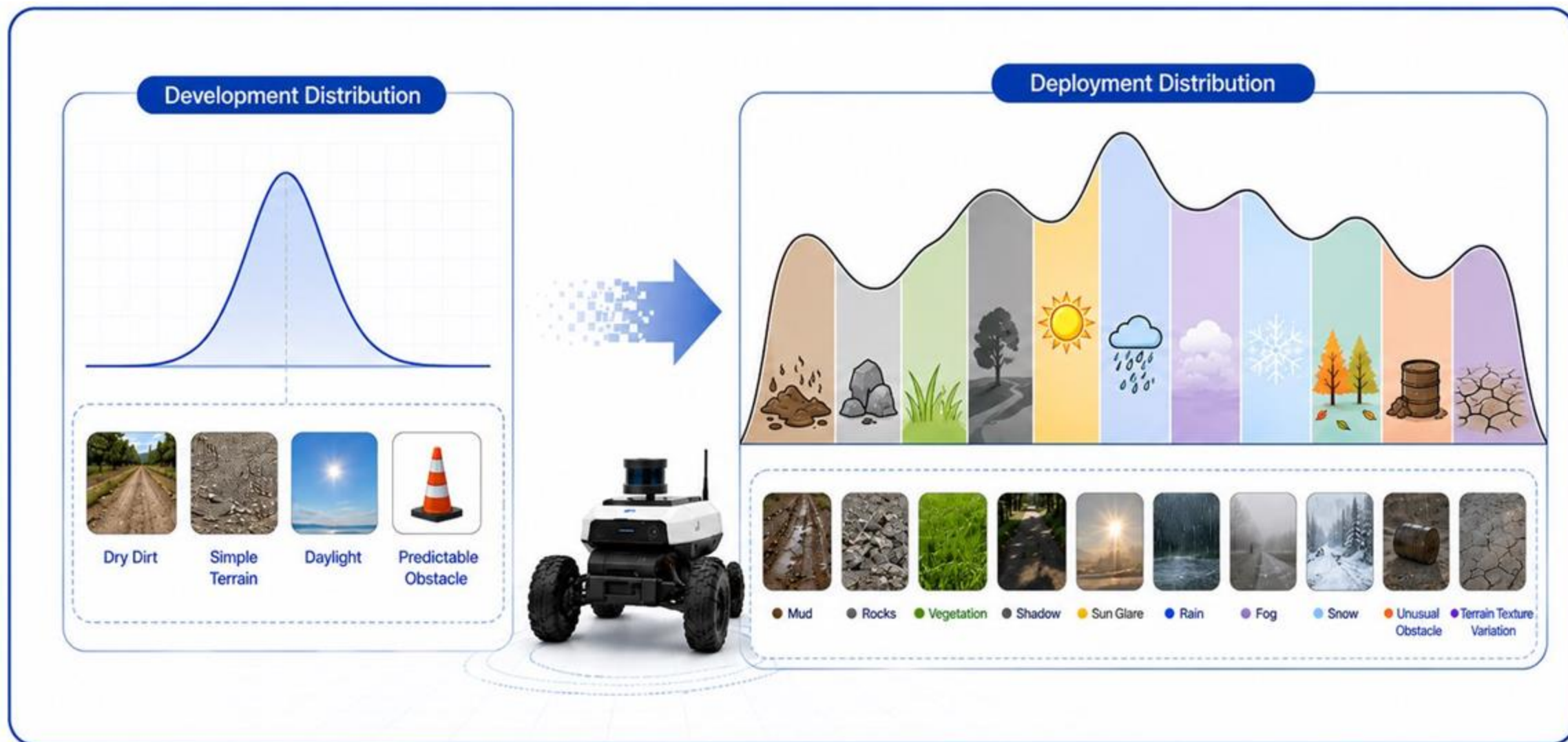


- ✓ controlled
- ✓ testable
- ✓ verified safety
- ✓ efficient at runtime

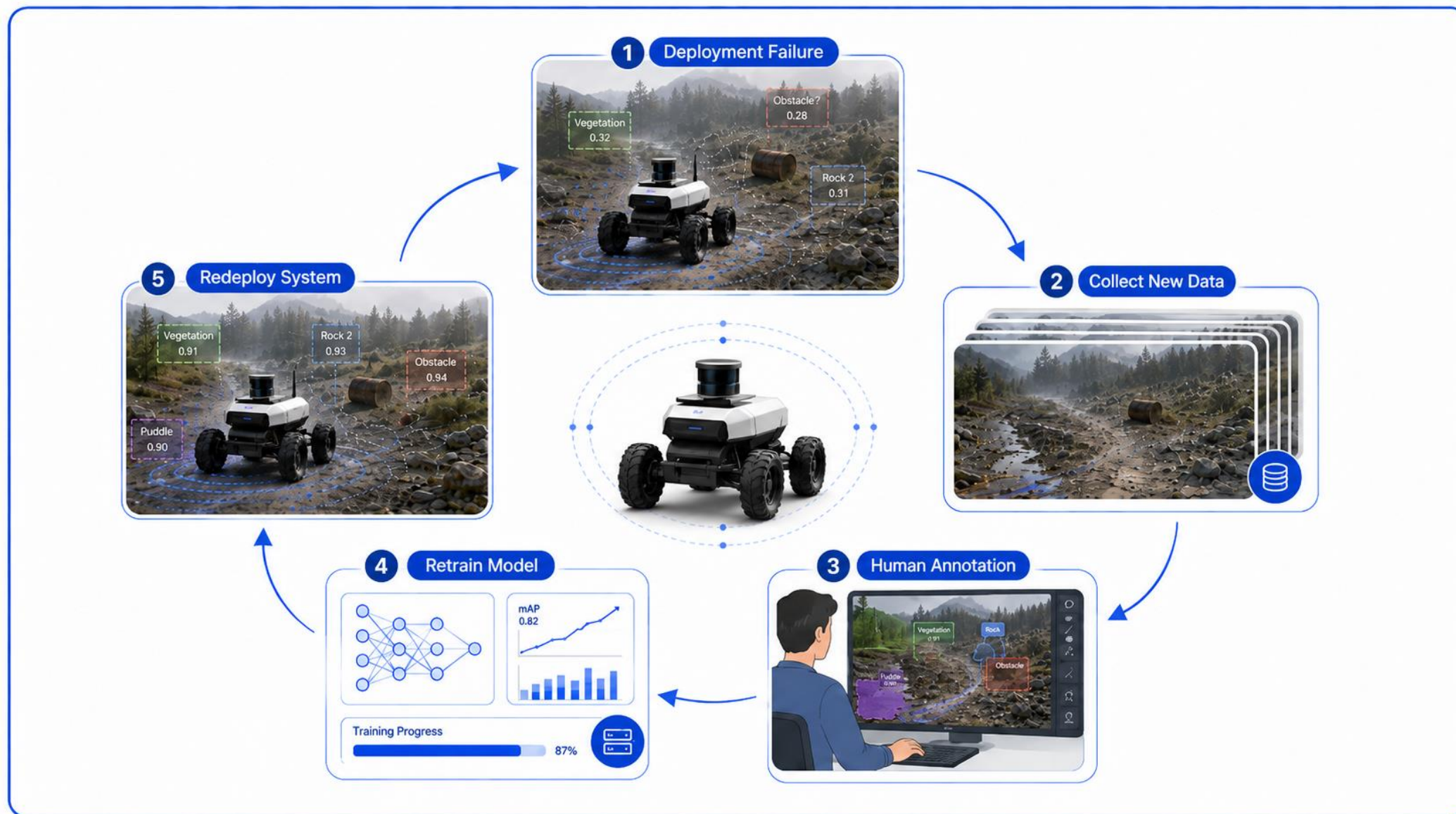
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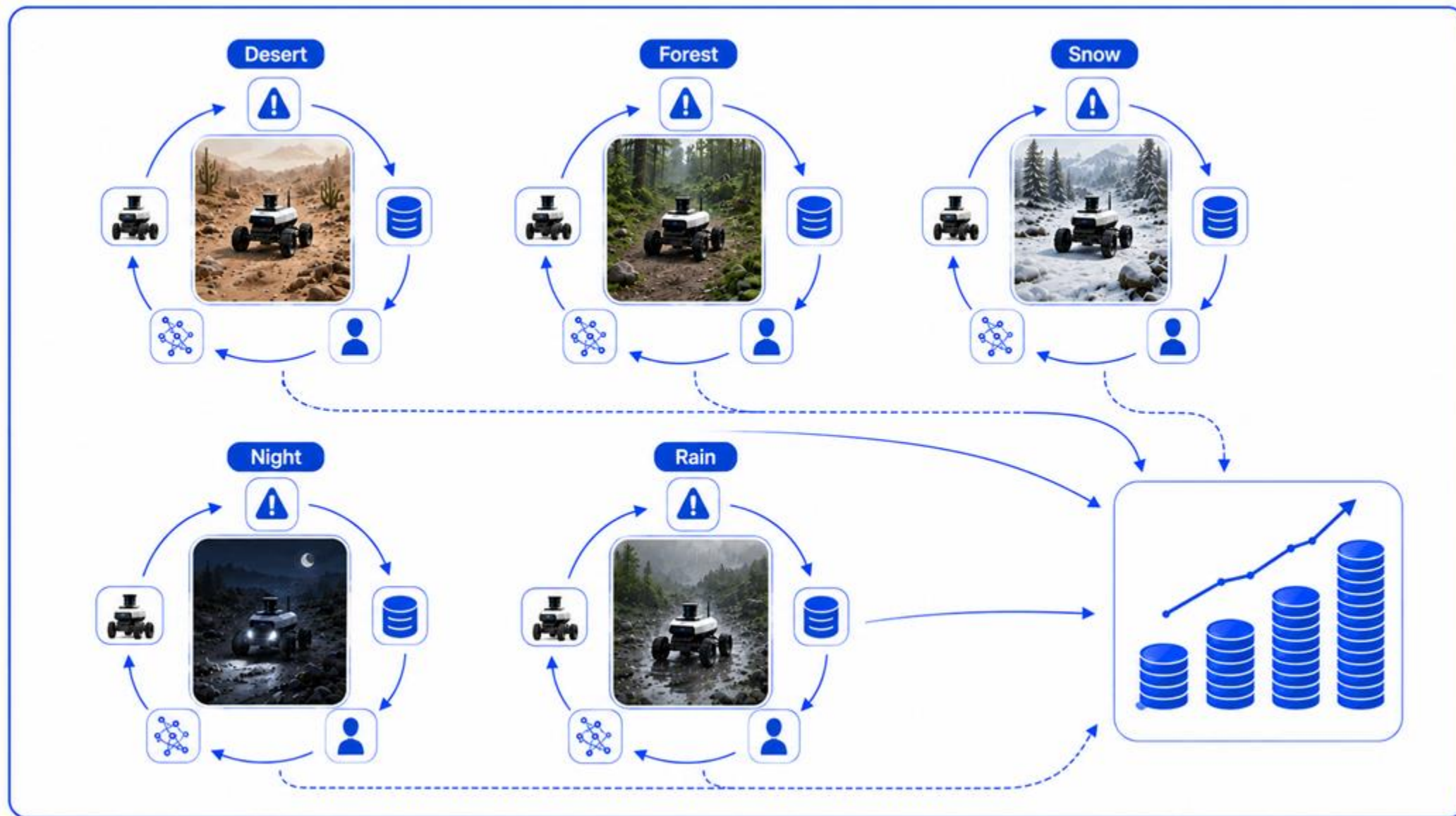
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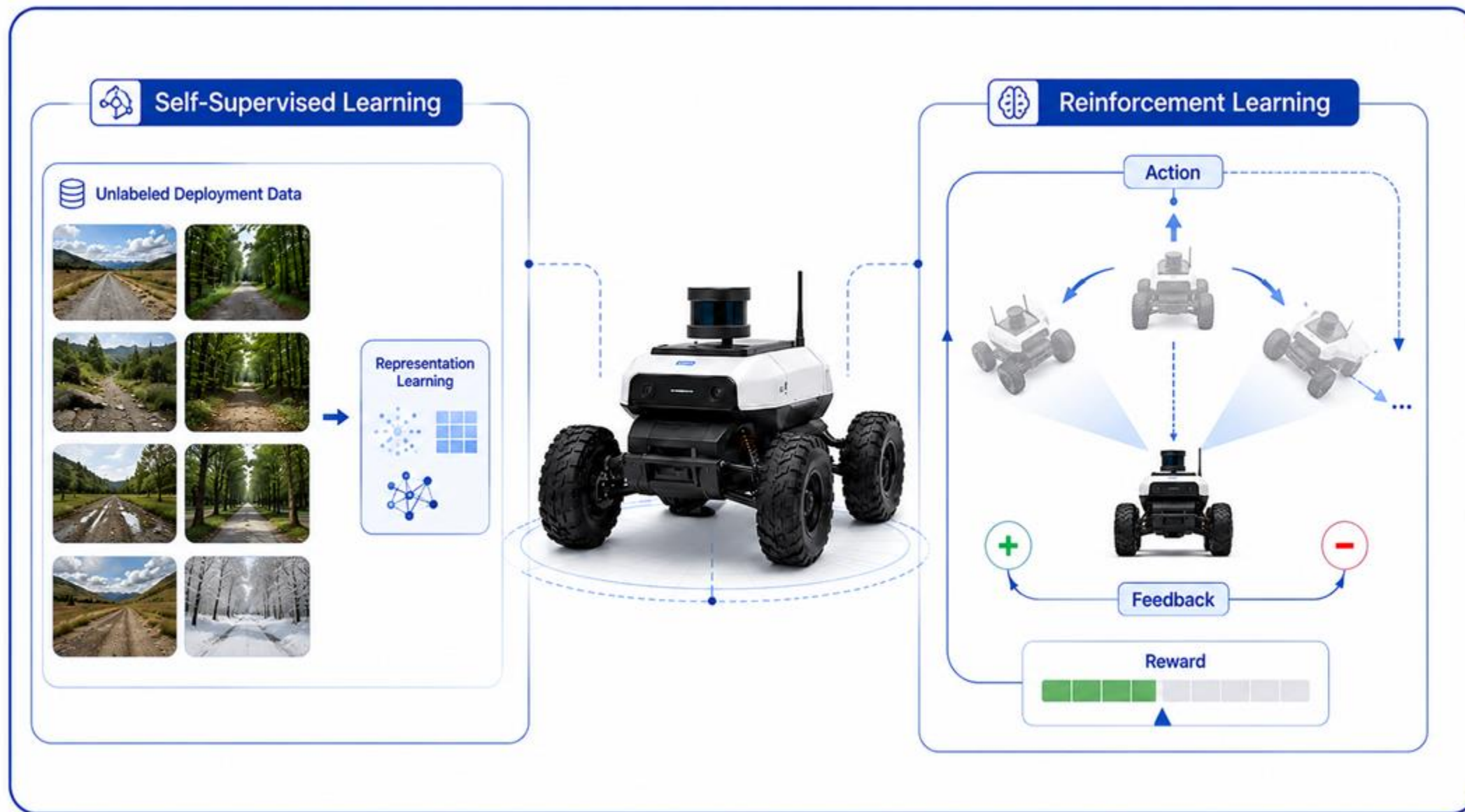
Why Robots Break in the Real World?



Why Robots Break in the Real World?



Adaptive Approaches & Online Learning



From observation to solution: introducing BINA



From observation to solution: introducing BINA



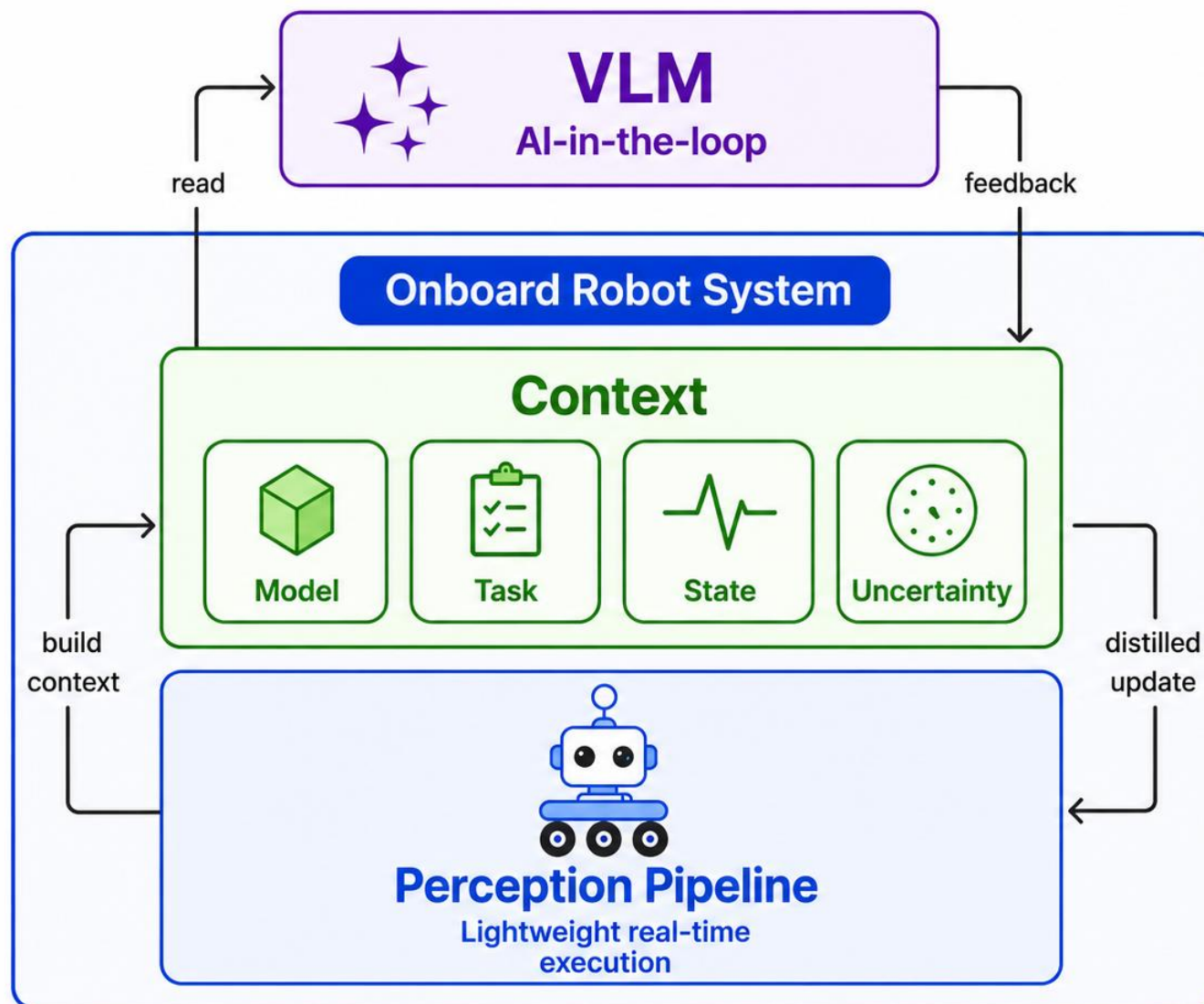
From observation to solution: introducing BINA



From observation to solution: introducing BINA



What is the core idea of BINA?



Demonstrating BINA Applications

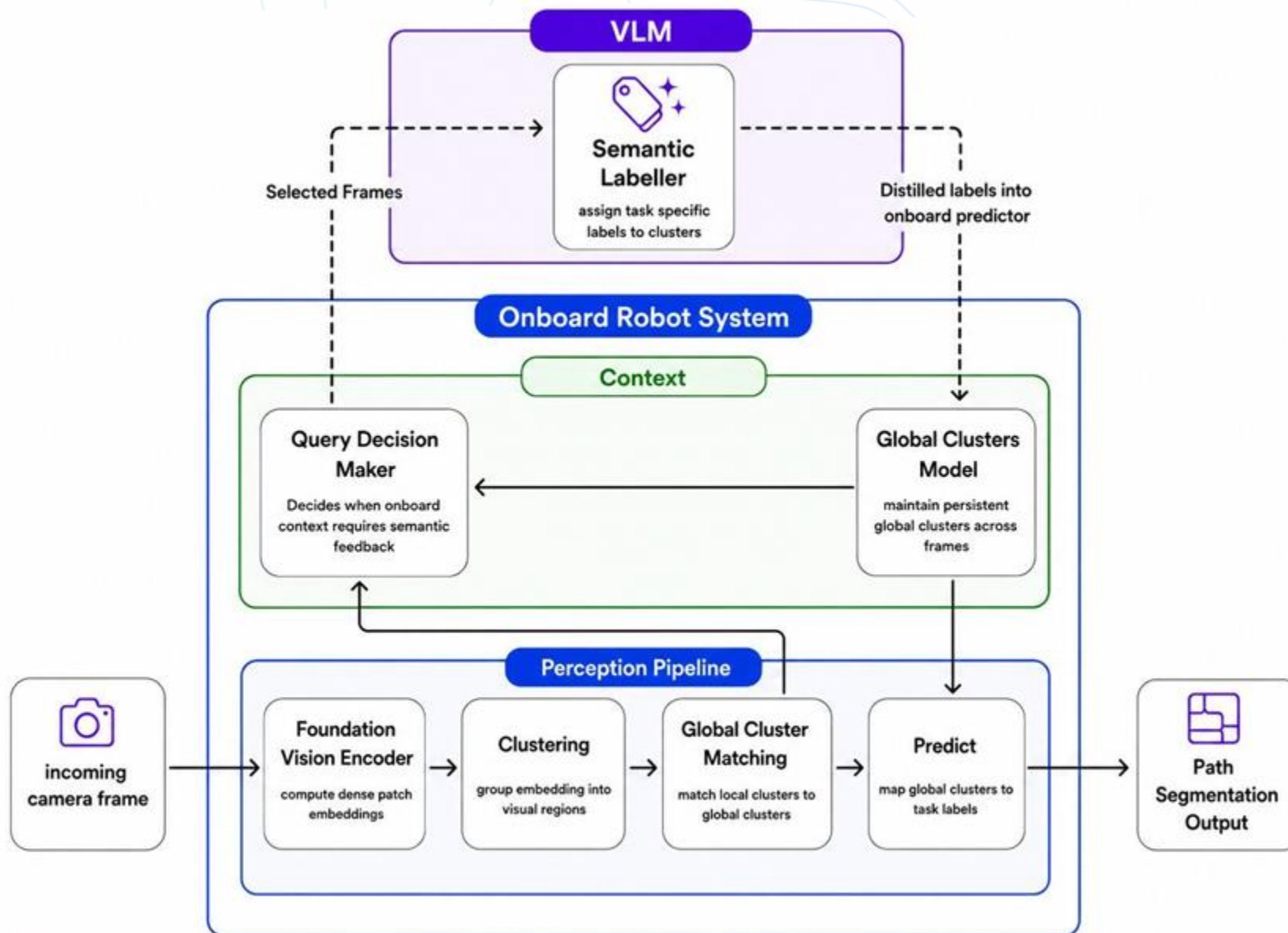
PATH SEGMENTATION



LEADER TRACKING



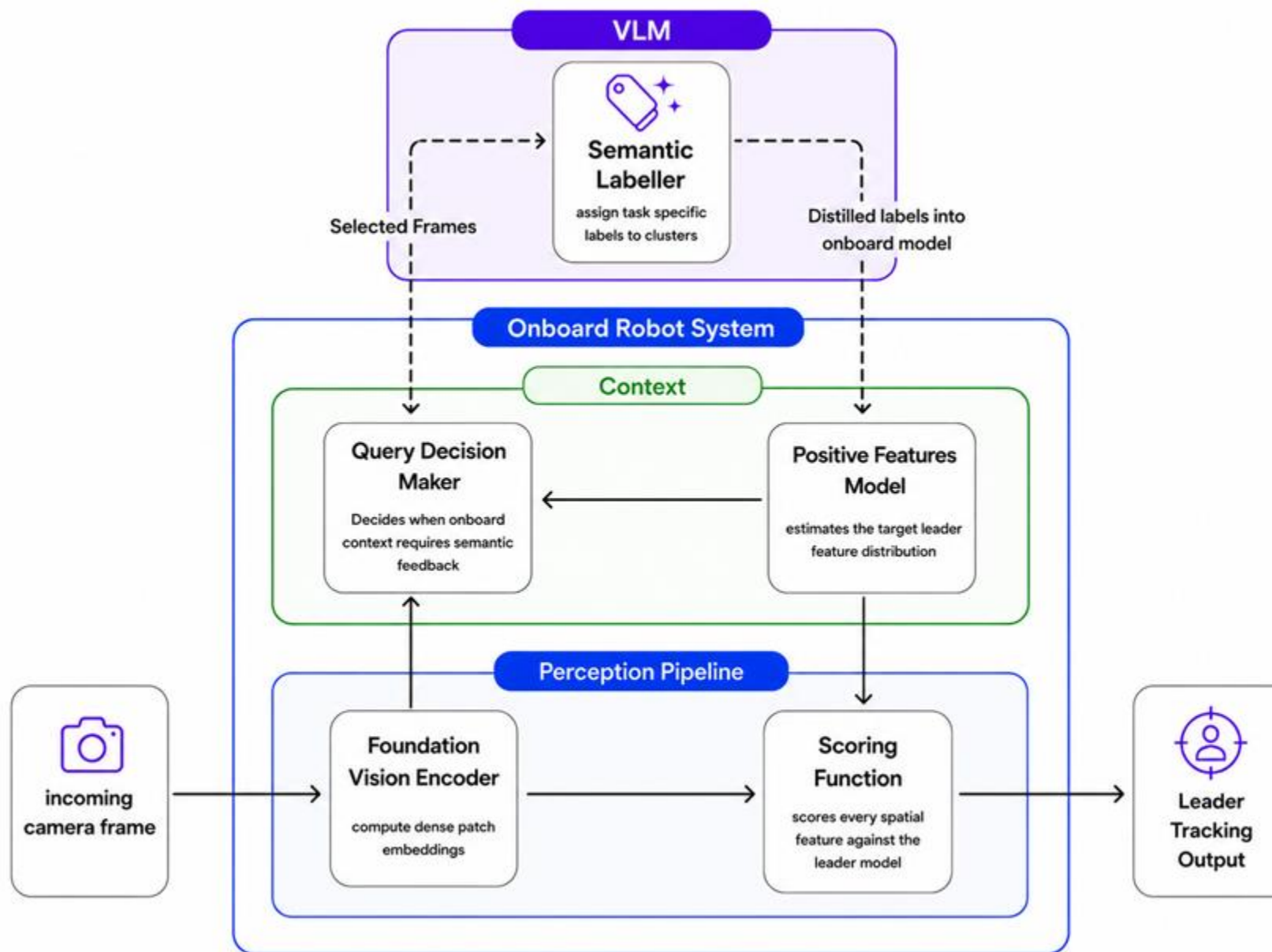
BINA for Off-Road Path Segmentation



path segmentation results



BINA for Leader Tracking



leader tracking results



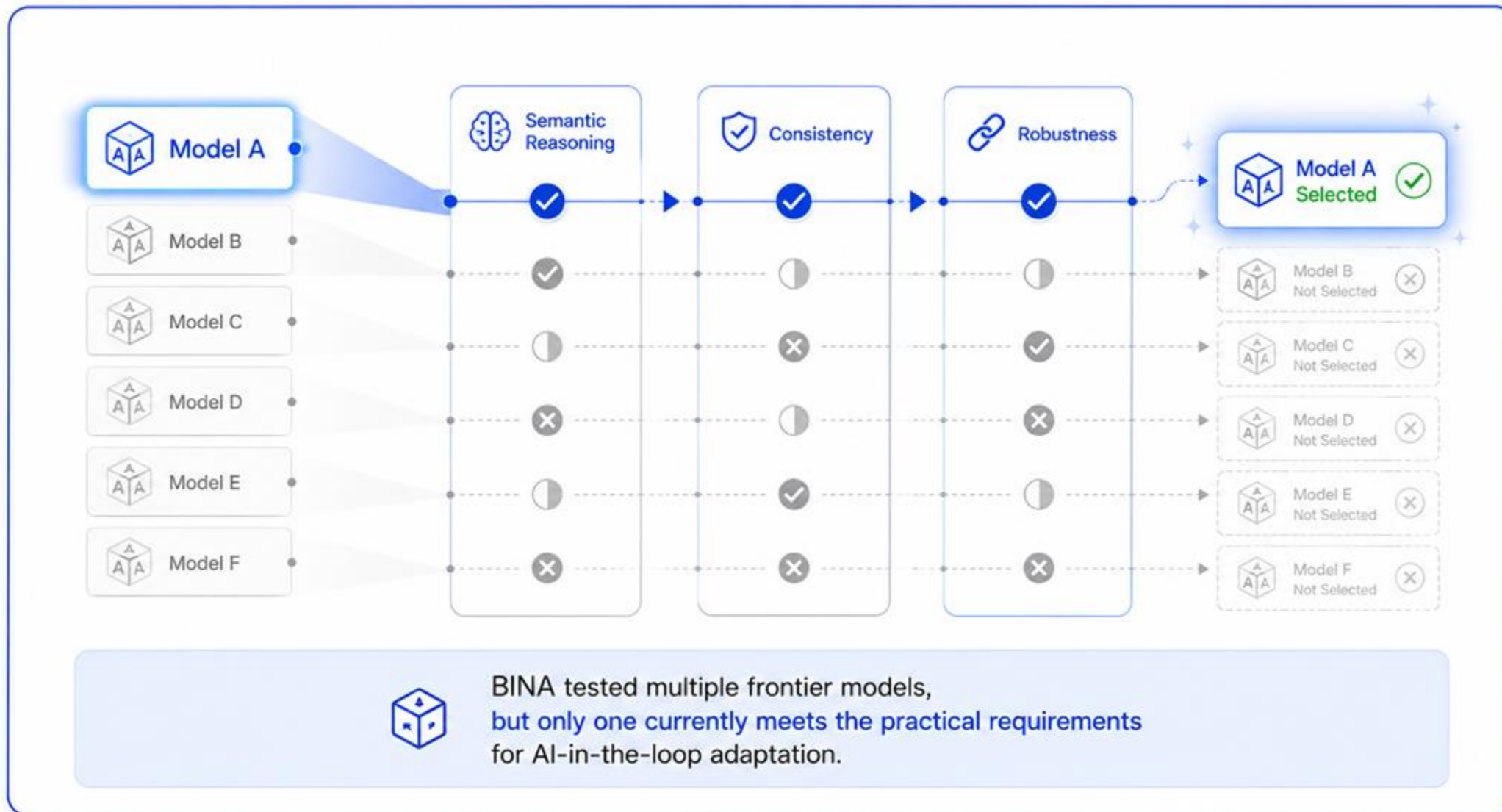
BINA as an AI-in-the-Loop Framework



BINA as an AI-in-the-Loop Framework



Looking Ahead



Looking Ahead



BINA grows alongside the next generation of intelligent models.



THANK YOU