



Project Title: Combinatorial Foundation Models

Principal Investigator: Pulkit Agrawal

Funding Amount: Alliances will fill out

Project Summary: With the emergence of foundation models that specialize in different facets of intelligence, from visual perception to motor control, we propose a paradigm to dynamically merge specialized models (visual, commonsense, planning, motor, etc.) to address complex tasks requiring diverse expertise. By integrating and reusing knowledge from multiple models, our approach enables the flexibility and robustness needed for long-horizon real-world problem-solving with robotics.

Combinatorial Foundation Models

Seungwook Han, Pulkit Agrawal (PI)

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PI: Pulkit Agrawal

Students & Collaborators: Seungwook Han, Anurag Ajay*, Yilun Du* et al.*

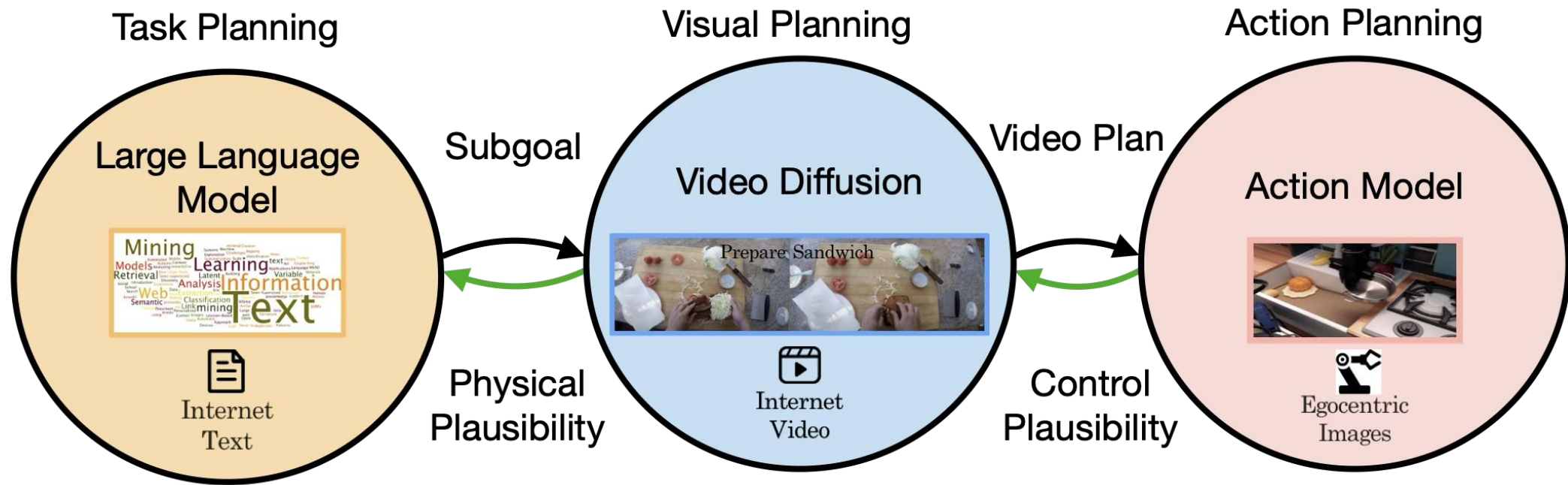
How do we get here?



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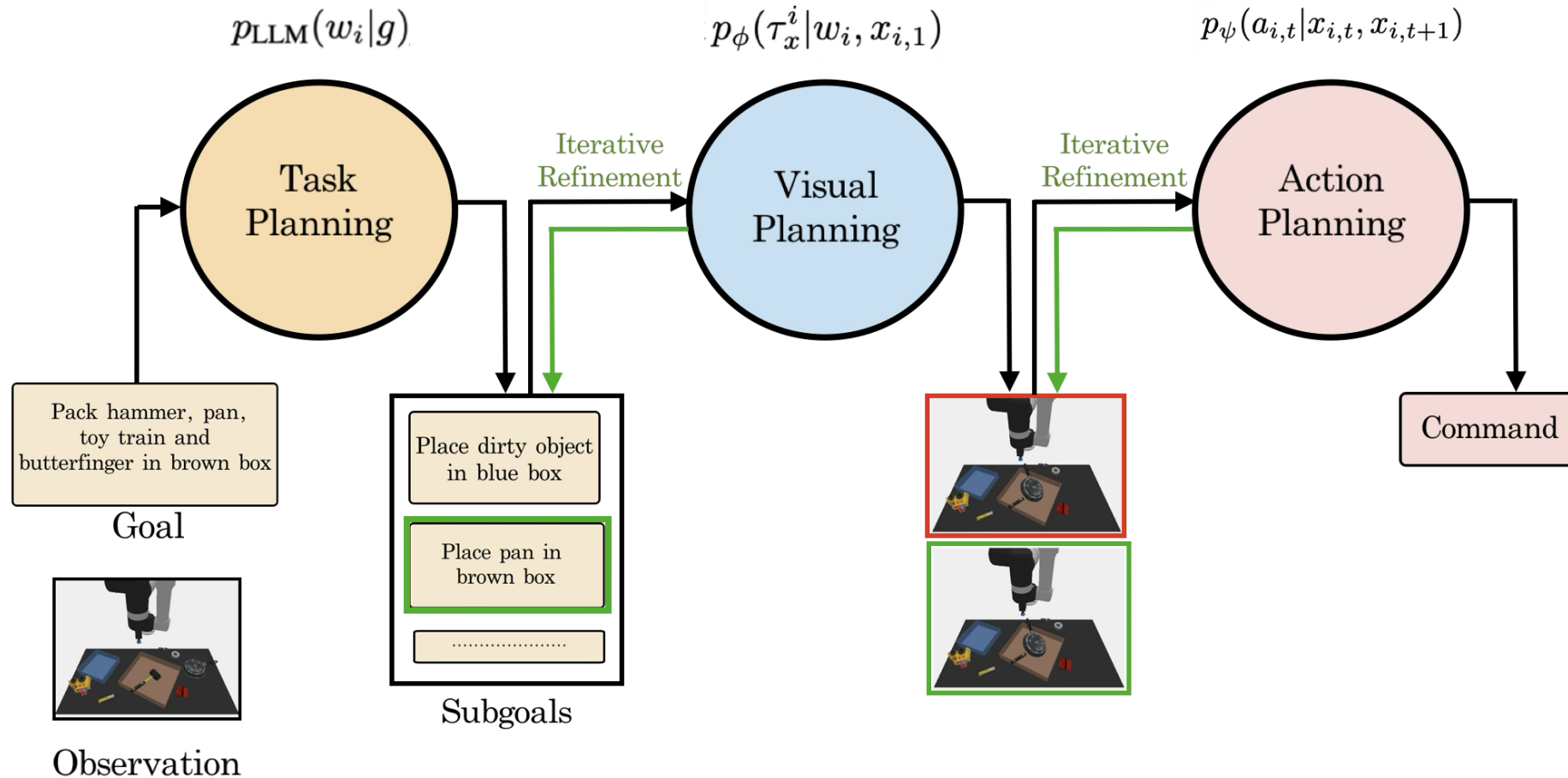
Iterative Refinement ensures consistency across models

- Compositional Foundation Model for Hierarchical Planning (Han*, Ajay*, Du* et al. NeurIPS 2023)
- <https://hierarchical-planning-foundation-model.github.io/>

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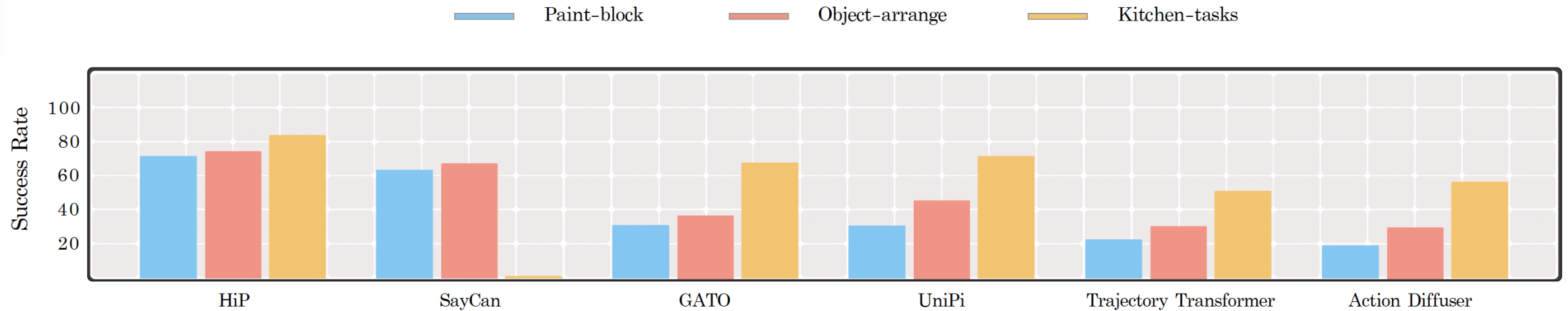


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