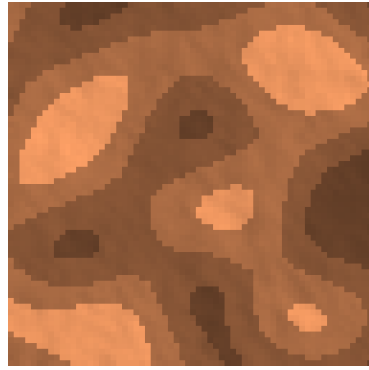
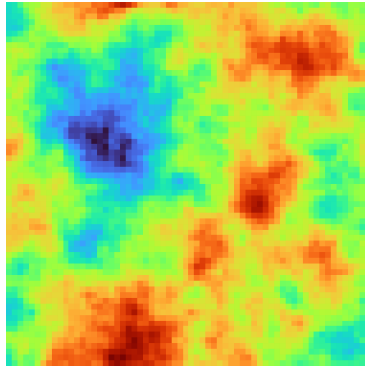


A. Synthetic Terrain Data Generation

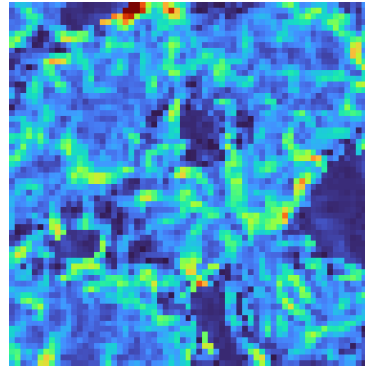
1. Environment Attributes



Color

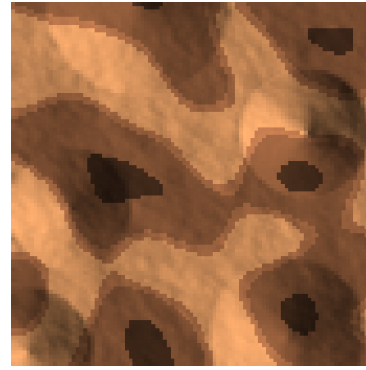


Elevation

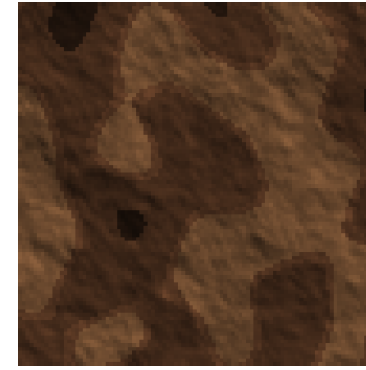


Traversability

2. Environment Characteristics



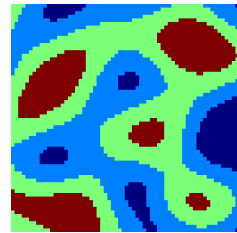
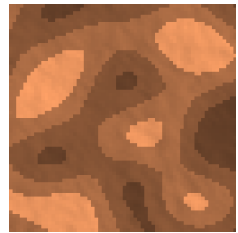
Crater Scenario



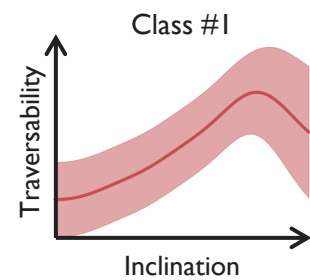
Shading Scenario

B. Probabilistic Traversability Prediction

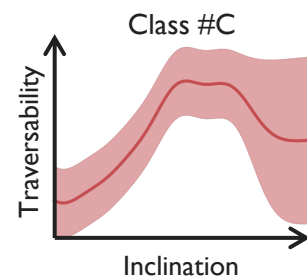
Pixel-wise Classification



Class-dependent Regression

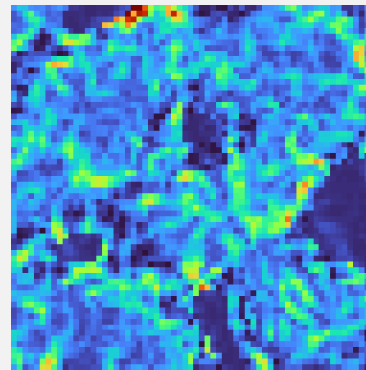


...

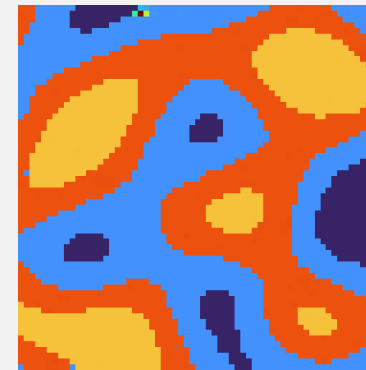


Σ

Traversability Model



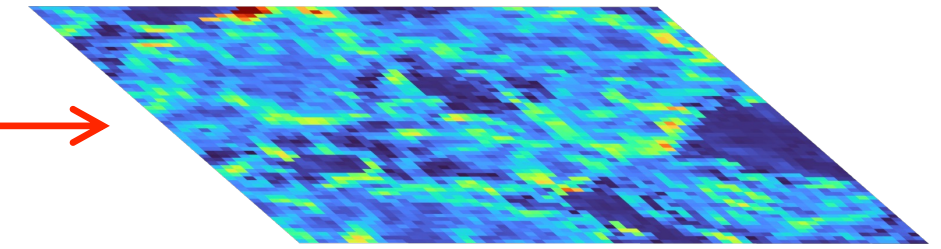
Predictive Mean



Standard Deviation

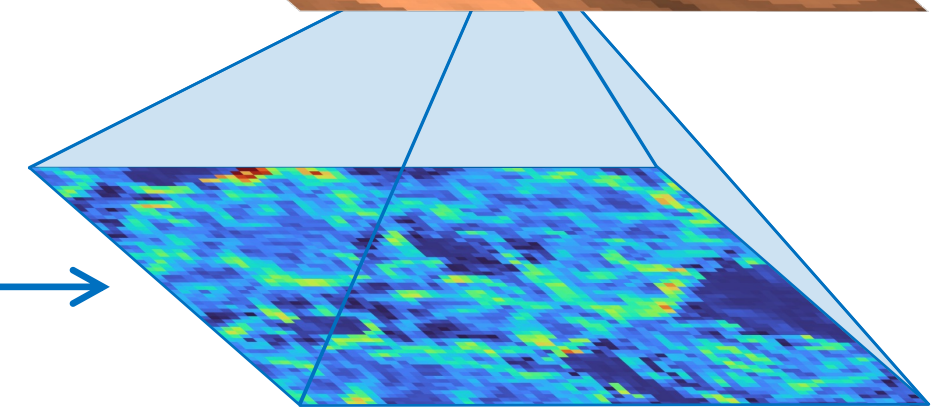
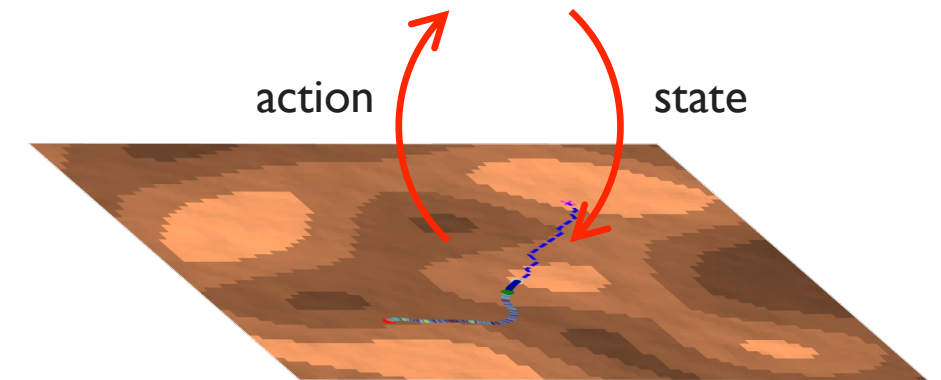
C. Path and Motion Planning Execution

Ground Truth: used for **simulation**



action

state



Prediction: used for **motion planning**