

User Problem

Design Space:

- Parameters
- Constraints

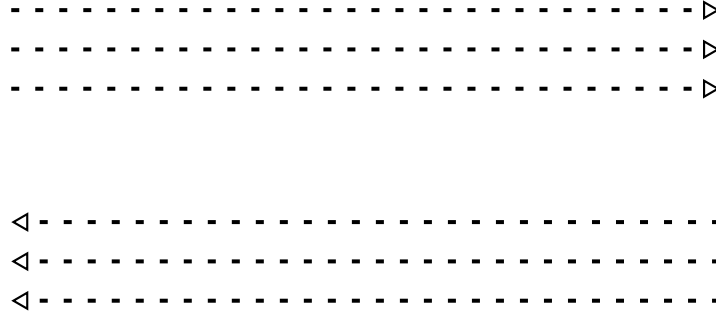
Optimization Metrics:

- Circuit Area
- DNN Accuracy
- Execution Time
- ...

Local measurements:

- Faster, secure
- Initial explorations, validation

1. Design Space specification:
 - Parameters, constraints, metrics
2. Local measurements
3. Code, dependencies for virtualization
4. Optimization method choice



1. List of experiments to run
2. Best configuration
3. Statistical Analyses
4. Remote measurements
5. Optimization method suggestions

DSEaaS

Experimental Design:

- Initial experiments
- Cost reduction

Statistical Learning and Search Heuristics:

- Where to explore next
- Exploit models

Statistical Analysis:

- Keep track of optimization
- Building & reusing models
- Data visualization

Experiments Engine:

- Virtualization
- Longer explorations

API