
Funsor Documentation

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Uber AI Labs

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CHAPTER 1

Domains

CHAPTER 2

Operations

CHAPTER 3

Interpretations

3.1 Interpreter

3.2 Monte Carlo

3.3 Memoize

4.1 Basic Funsors

4.2 Delta

4.3 PyTorch

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CHAPTER 5

Optimizer

CHAPTER 6

Adjoint Algorithms

CHAPTER 7

Sum-Product Algorithms

CHAPTER 8

Affine Pattern Matching

CHAPTER 9

Testing Utiltites

Pyro-Compatible Distributions

This interface provides a number of PyTorch-style distributions that use functors internally to perform inference. These high-level objects are based on a wrapping class: `FunsorDistribution` which wraps a functor in a PyTorch-distributions-compatible interface. `FunsorDistribution` objects can be used directly in Pyro models (using the standard Pyro backend).

10.1 FunsorDistribution Base Class

10.2 Hidden Markov Models

10.3 Conversion Utilities

CHAPTER 11

Distribution Funsors

This interface provides a number of standard normalized probability distributions implemented as funsors.

CHAPTER 12

Mini-Pyro Interface

This interface provides a backend for the Pyro probabilistic programming language. This interface is intended to be used indirectly by writing standard Pyro code and setting `pyro_backend("functor")`. See `examples/minipyro.py` for example usage.

CHAPTER 13

Einsum Interface

This interface implements tensor variable elimination among tensors. In particular it does not implement continuous variable elimination.

CHAPTER 14

Indices and tables

- `genindex`
- `modindex`
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