Generic Report

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March 18, 2024

Abstract

What is life? Why are we here? Where did we come from?

1 Introduction

This is an introduction.

2 Preliminaries

This is the preliminary (hyperref without text labeling).

3 Blah Blah Bleeeh

This is the blah blah bleeeh section.

3.1 Blah Blah Blah Bleeh Bleeh Bleeh

Check out this cool Bibtext ref [1, this], wooooooooooah, also it's in plain style. For some mind altering psychodelic, read algorithm 1 for the experience. For some brain expanding julia code, read brain expanding julia code.

Algorithm 1 Metropolis Chain

Input: $X^{(t)}$

$Y^{(t)} \sim q(\cdot|X^{(t)})$

$\rho(x, y) := \min\left\{\frac{f(y)}{f(x)}\frac{q(x|y)}{q(y|x)}, 1\right\}$

$$X^{(t+1)} := \begin{cases} Y^{(t)} & \text{w.p} : \rho(X^{(t)}, Y^{(t)}) \\ X^{(t)} & \text{otherwise} \end{cases}$$

(a) Cute Alto

(b) Minty and Alto

```
"""
A doubly stochastic chain sampler that uses wrapped guassian distributions on both directions in 2D
with a fixed variance.
"""
function wrapped_gaussian_sampler_2d(
    state::Vector{T},
    lower_left::Tuple{Real, Real},
    upper_right::Tuple{Real, Real};
    sigma::Real=1
) where {T<:Real}
    lower = [lower_left[1], lower_left[2]]
    upper = [upper_right[1], upper_right[2]]
    function loop_back(x, l, u)  # assert periodic conditions on the rectangle.
        return mod(x, u - l) + l
    end
    N = Normal(0, sigma)
    return loop_back.(state + rand(N, 2), lower, upper)
end
```

A Bleeh Bleeh Bleeh I am not Listening

This is the Bleeh Bleeh Bleeh I am not Listening section.

B This section is in another .tex file

This is a new section.

B.1 Subsection

This is a subsection.

B.2 Cute Subsection

Check out this cute figure. In fig 1a is cute pink unicorn, and in fig 1b, the green earth pony is minty, a cookie pone. Theyare cute together. Read source to understand the use of "subfloat" and "figure" together with "hyperref".

References

[1] Donald E. Knuth. *The TEX Book*. Addison-Wesley Professional, 1986.