

# CPSC532W: Probabilistic Programming, Homework 2

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My code for this homework can be found here: <https://github.com/namratadeka/cpsc532W/tree/main/CS532-HW2>.

## 1. Evaluation-Based Sampling Results

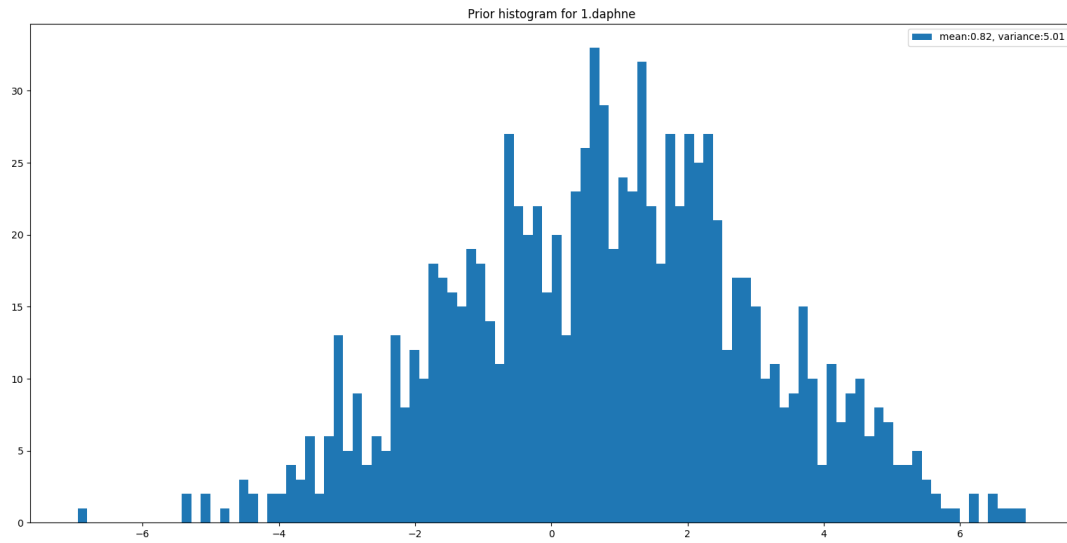


Figure 1: Samples from the prior of 1.daphne

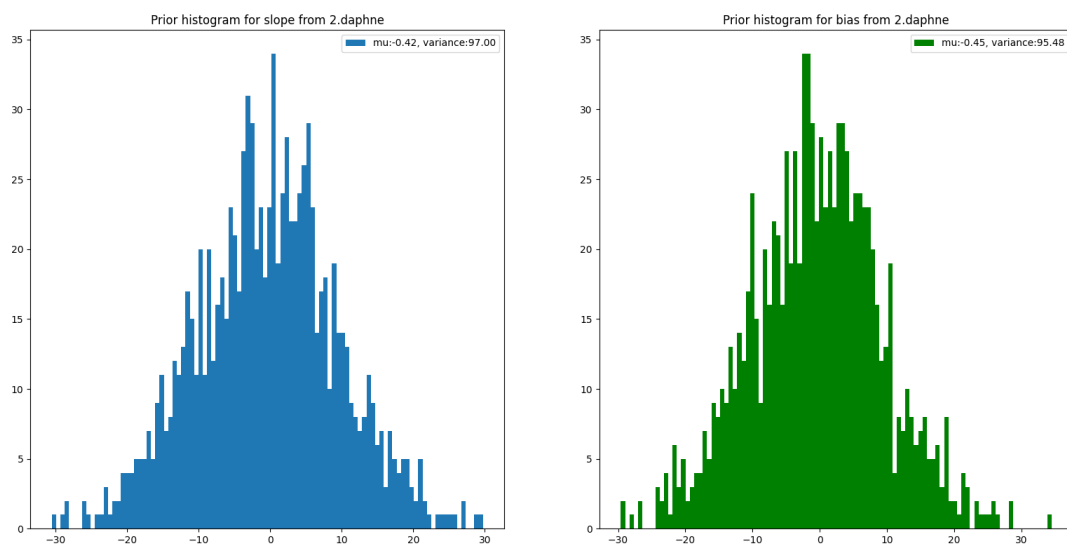


Figure 2: Samples from the prior of 2.daphne. **Right:** Prior for slope. **Left:** Prior for bias.

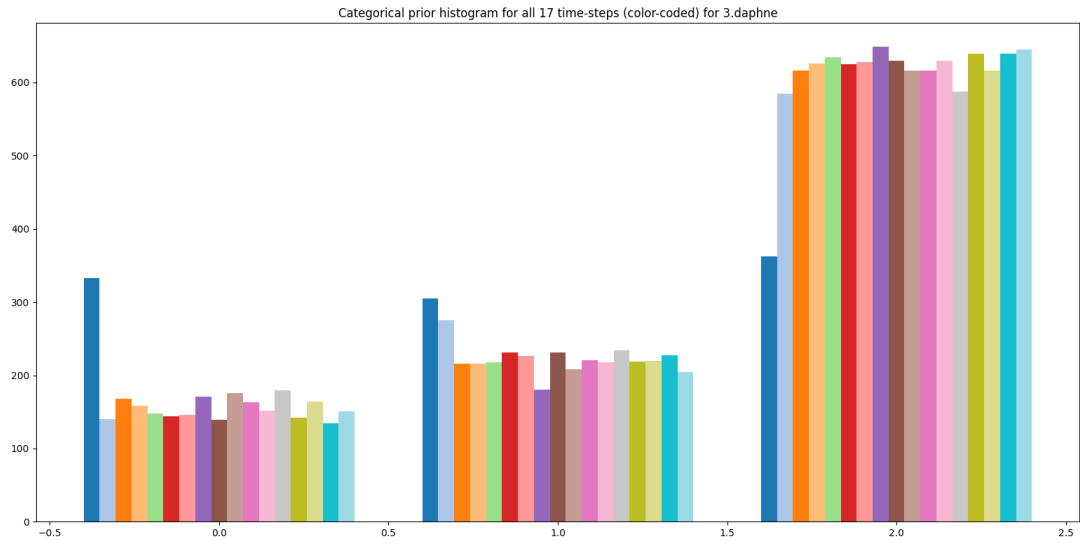


Figure 3: Samples from the prior of 3.daphne. Each color represents one of the 17 hmm steps.

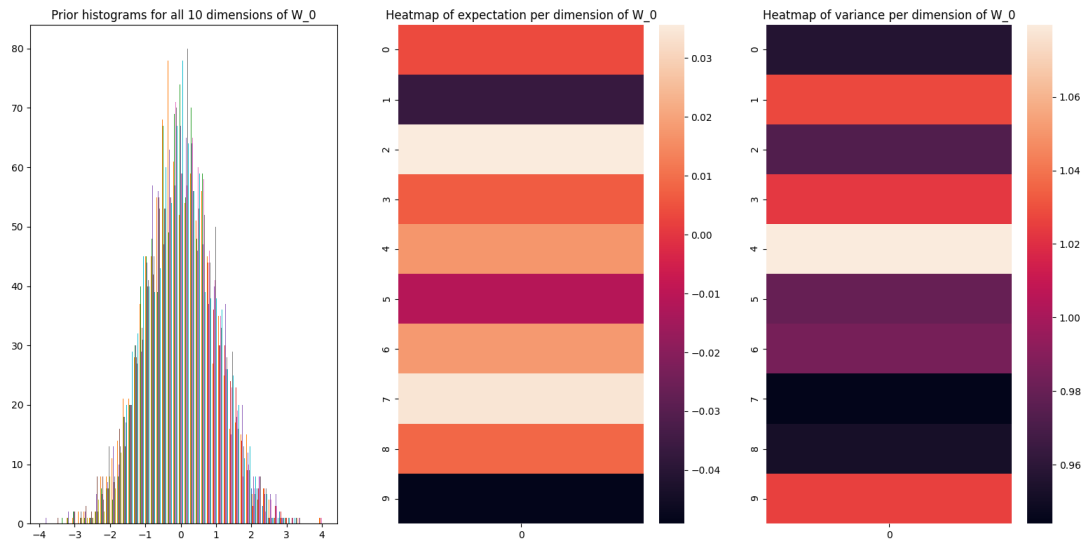


Figure 4: Histogram and heatmaps of mean and variance for  $W_0$  from 4.daphne

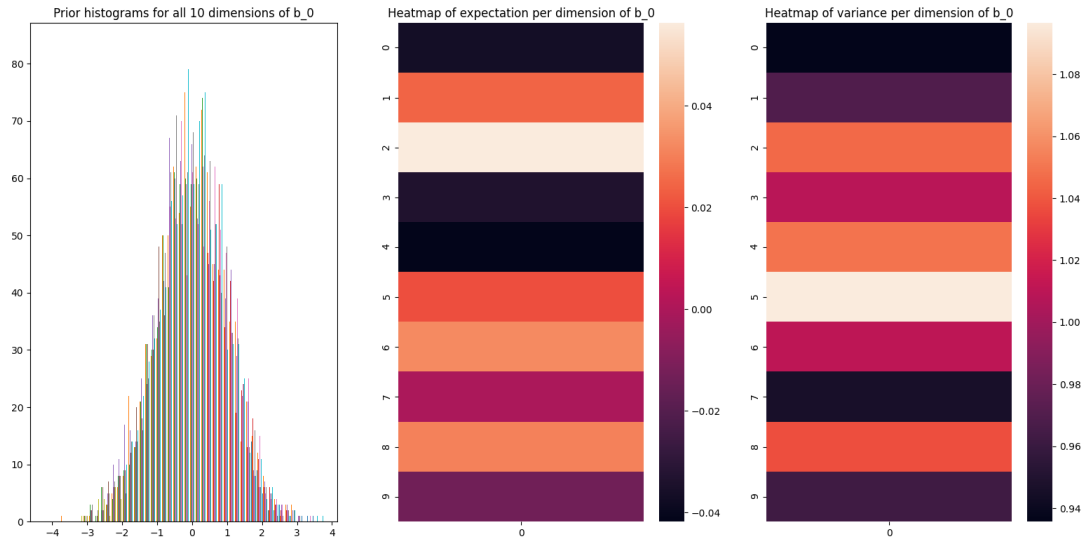


Figure 5: Histogram and heatmaps of mean and variance for  $b_0$  from 4.daphne

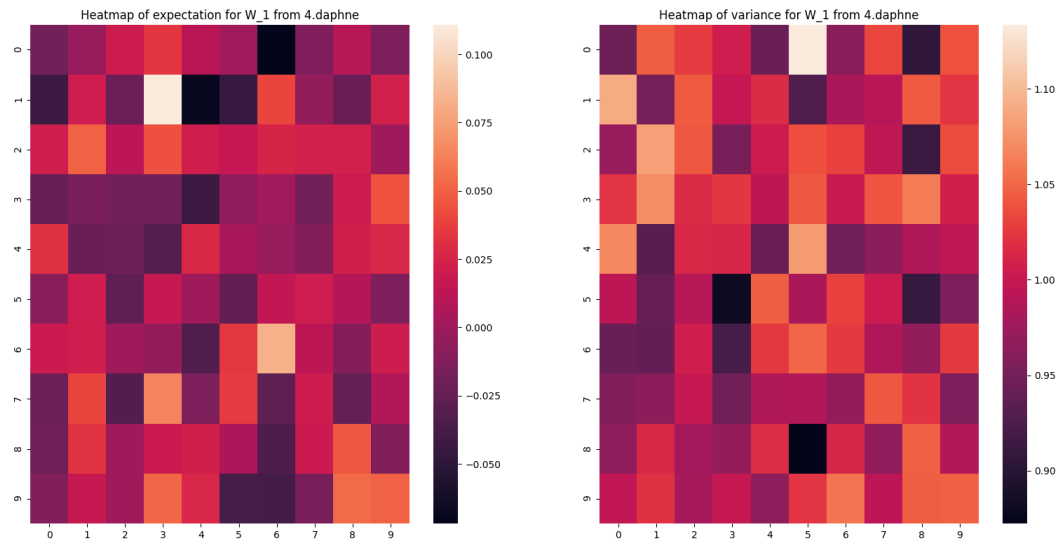


Figure 6: Heatmaps of mean and variance for  $W_1$  from 4.daphne

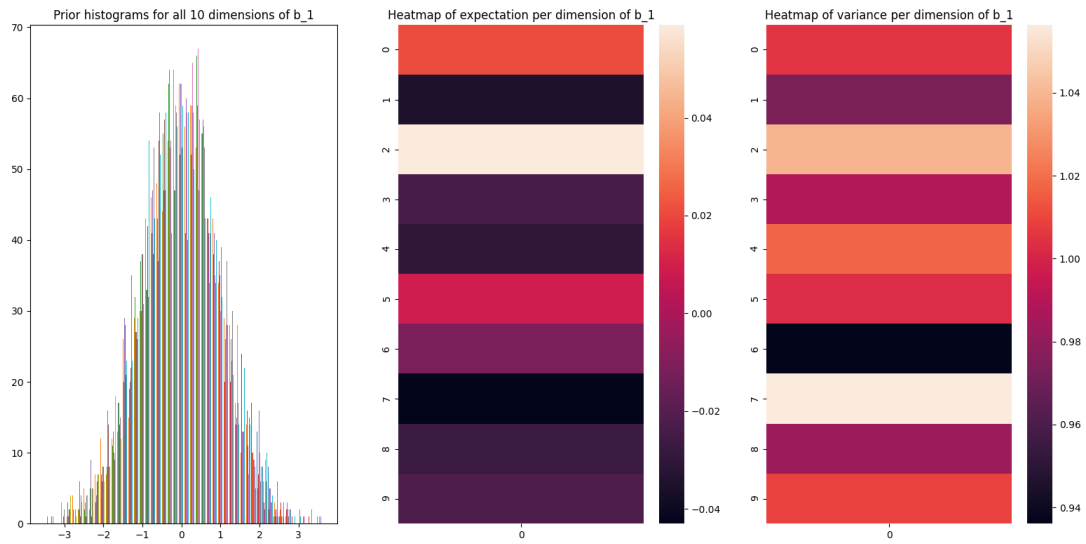


Figure 7: Histogram and heatmaps of mean and variance for  $b_1$  from 4.daphne

## 2. Graph-Based Sampling Results

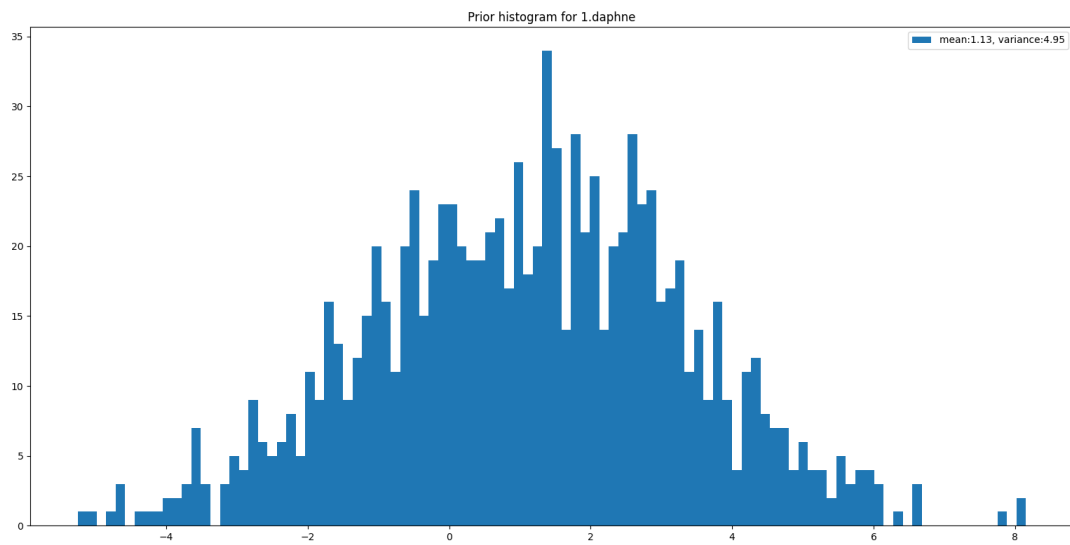


Figure 8: Samples from the prior of 1.daphne

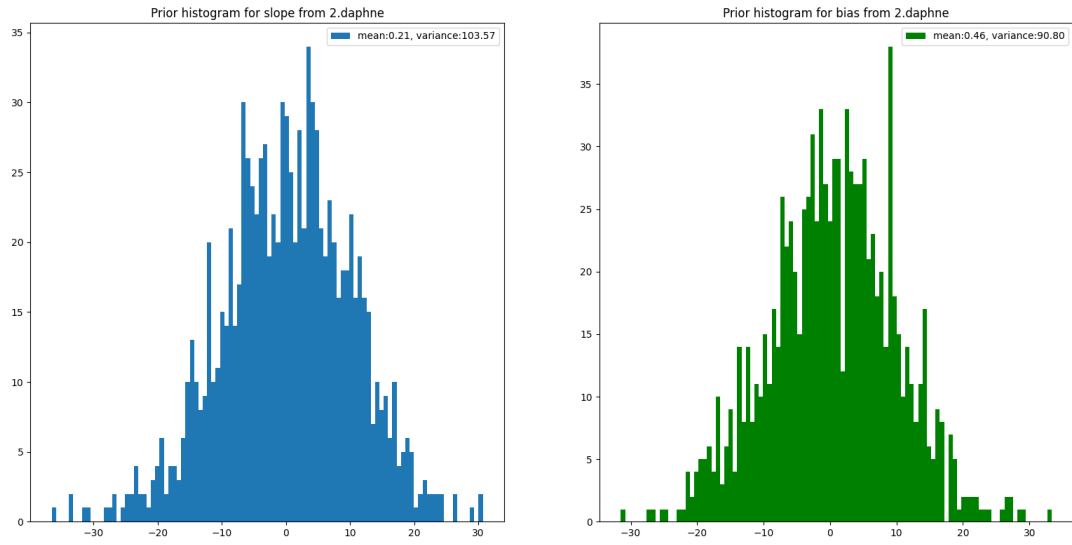


Figure 9: Samples from the prior of 2.daphne. **Right:** Prior for slope. **Left:** Prior for bias.

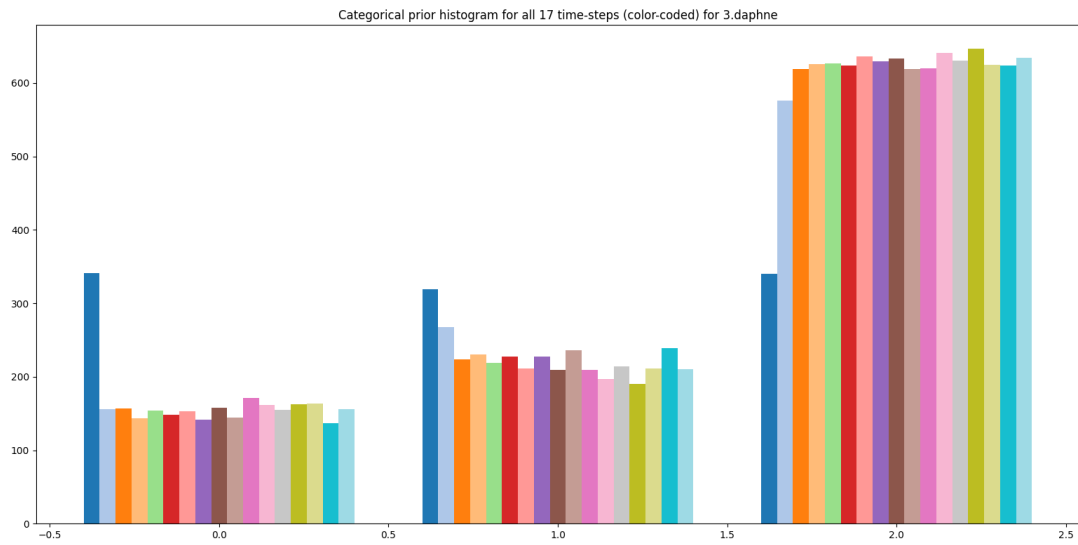


Figure 10: Samples from the prior of 3.daphne. Each color represents one of the 17 hmm steps.

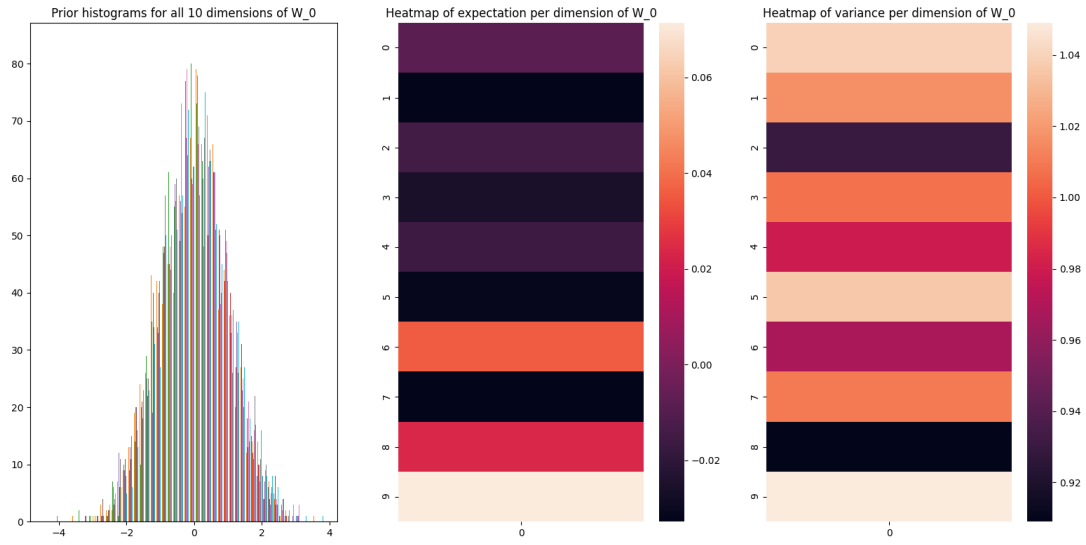


Figure 11: Heatmaps of mean and variance for  $W_0$  from 4.daphne

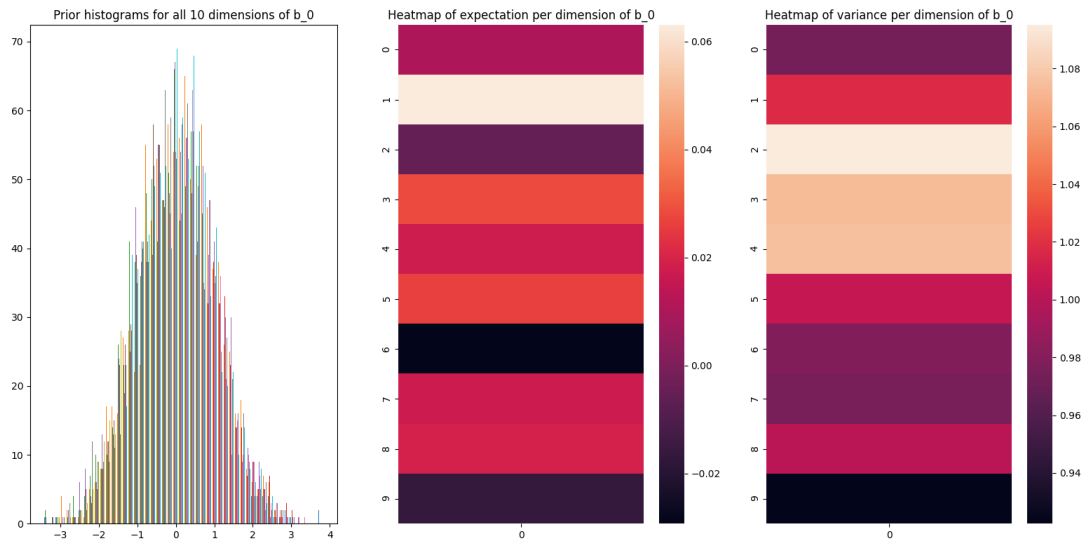


Figure 12: Heatmaps of mean and variance for  $b_0$  from 4.daphne

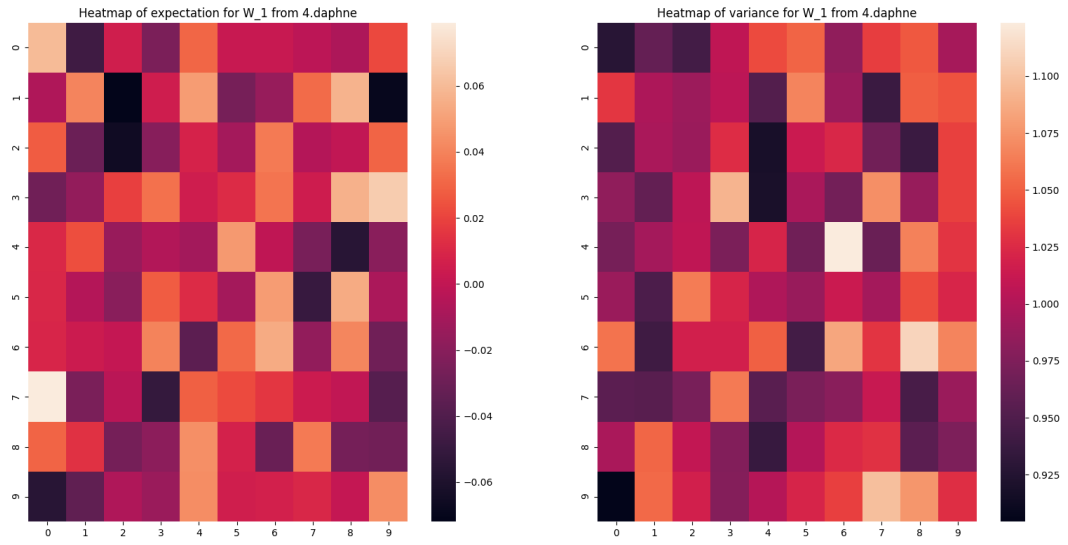


Figure 13: Heatmaps of mean and variance for W\_1 from 4.daphne

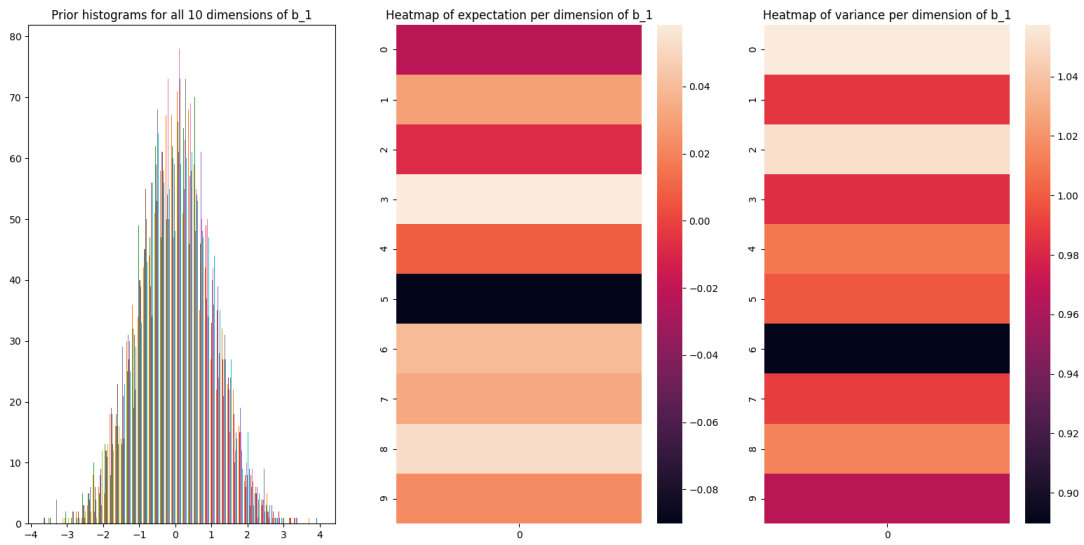


Figure 14: Heatmaps of mean and variance for b\_1 from 4.daphne