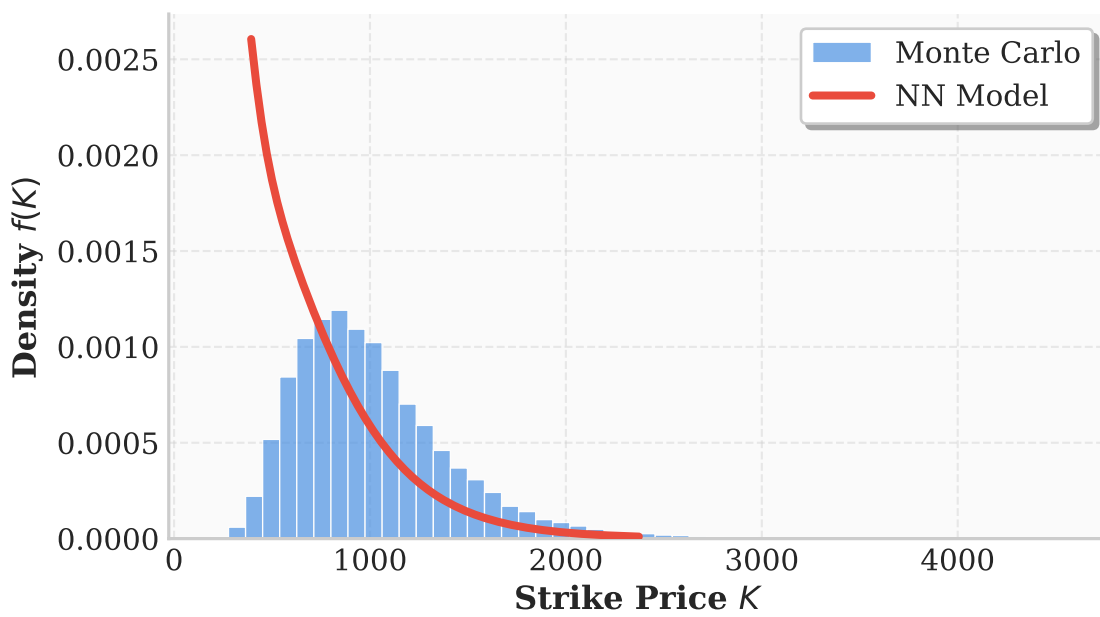


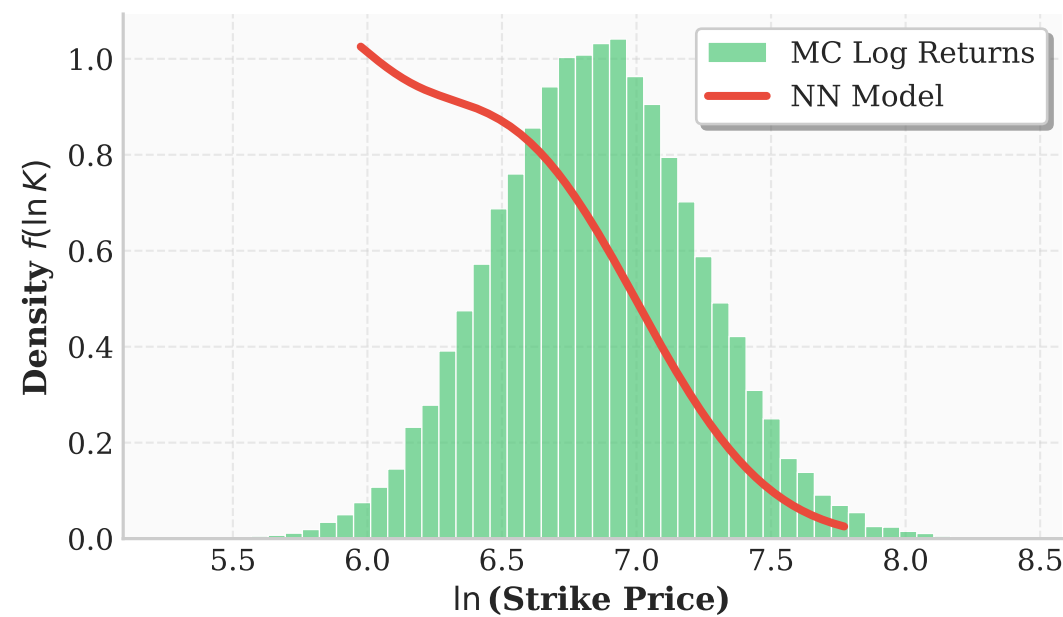
# PDF Analysis: Neural Network Synthetic Local Volatility Model

## Monte Carlo with $dS_t = rS_t dt + \sigma_{NN}(t, S)S_t dW_t$

**Strike Distribution (T = 0.50)**



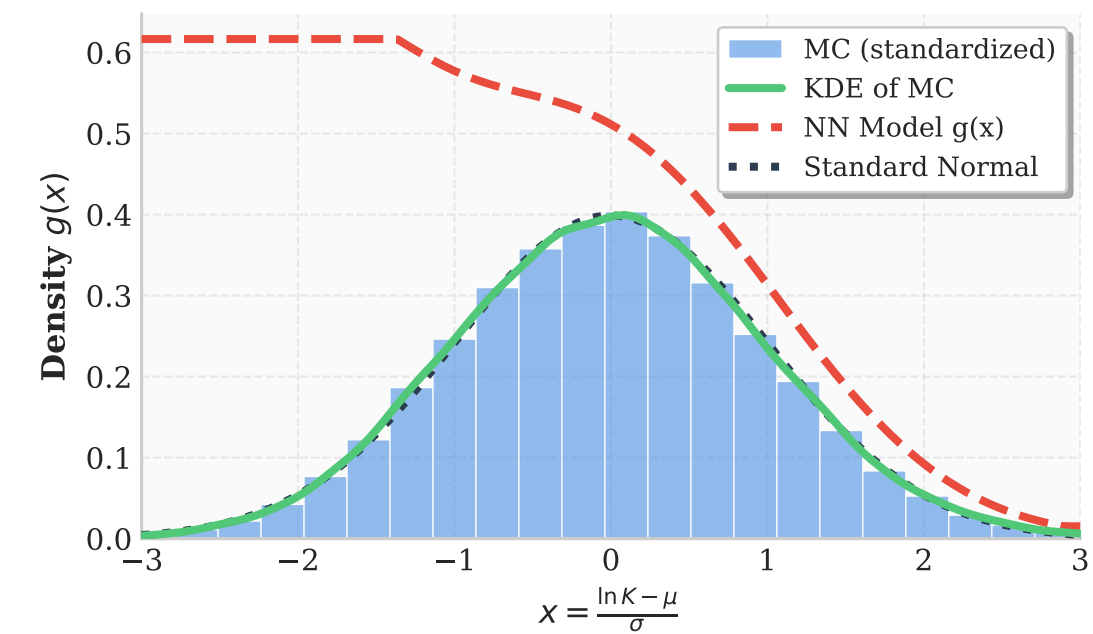
**Log-Normal Distribution (T = 0.50)**



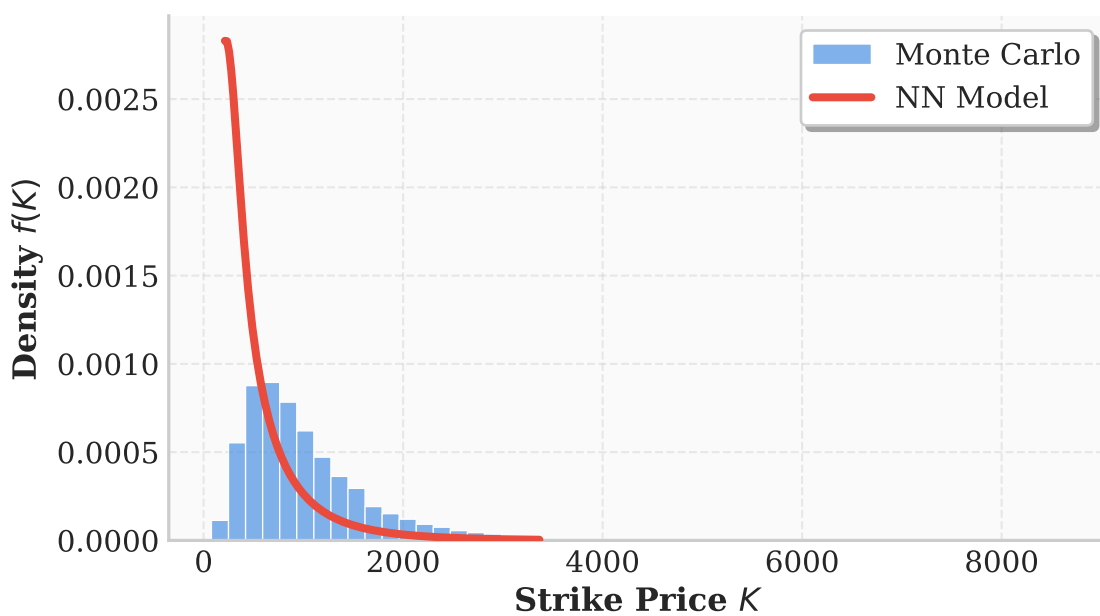
**Gaussian Space (T = 0.50)**

$\mu = 6.55, \sigma = 0.42$

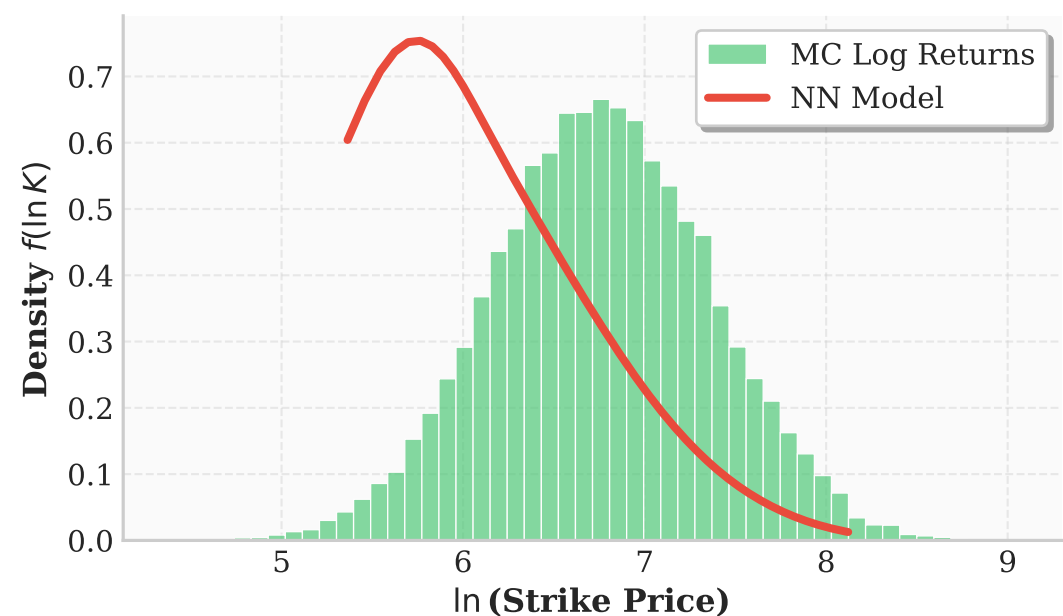
**Skew=0.06, ExKurt=0.04**



**Strike Distribution (T = 1.00)**



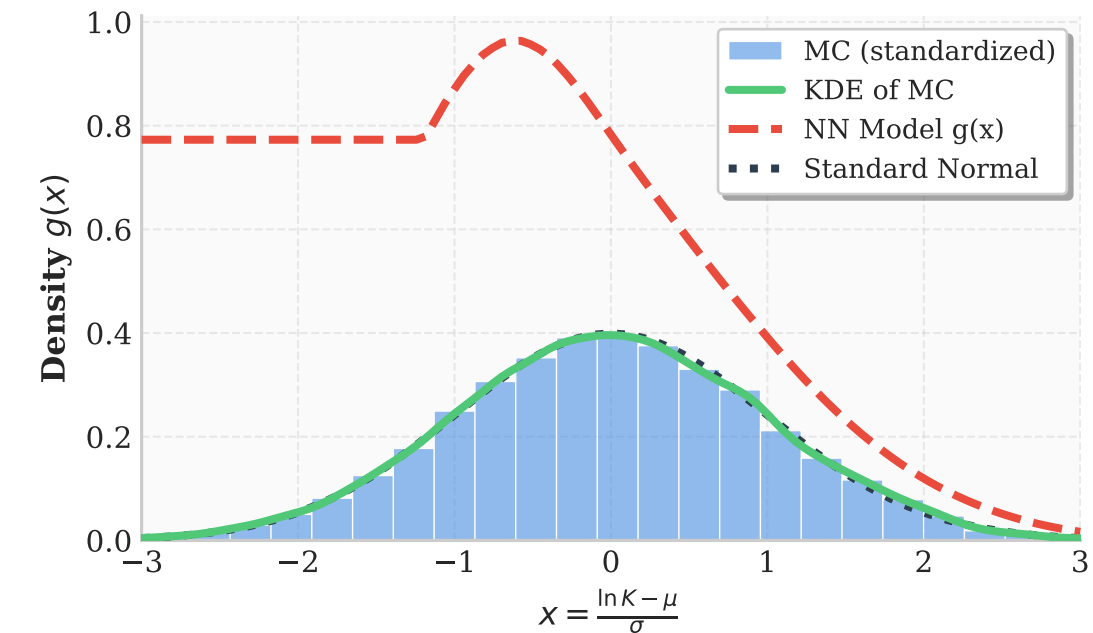
**Log-Normal Distribution (T = 1.00)**



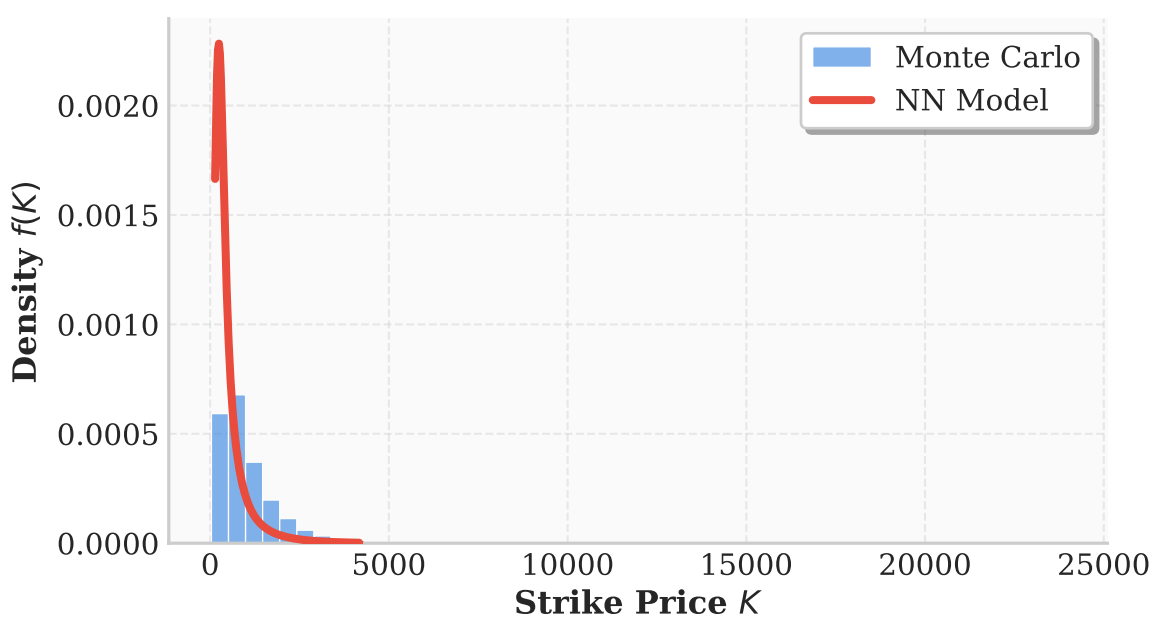
**Gaussian Space (T = 1.00)**

$\mu = 6.15, \sigma = 0.66$

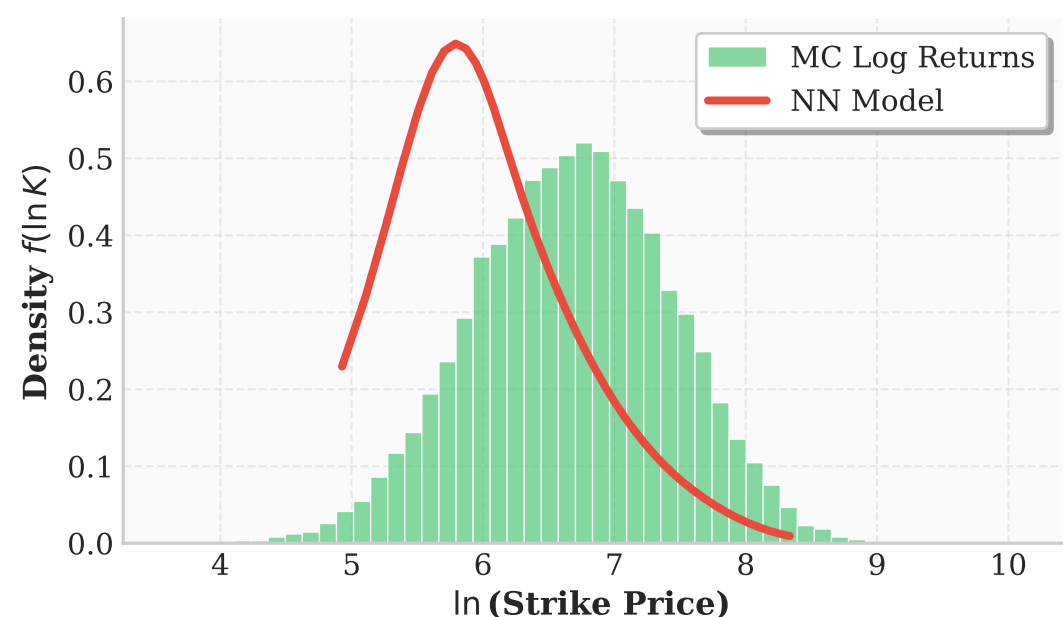
**Skew=-0.01, ExKurt=-0.06**



**Strike Distribution (T = 1.50)**



**Log-Normal Distribution (T = 1.50)**



**Gaussian Space (T = 1.50)**

$\mu = 6.00, \sigma = 0.77$

**Skew=-0.07, ExKurt=-0.14**

