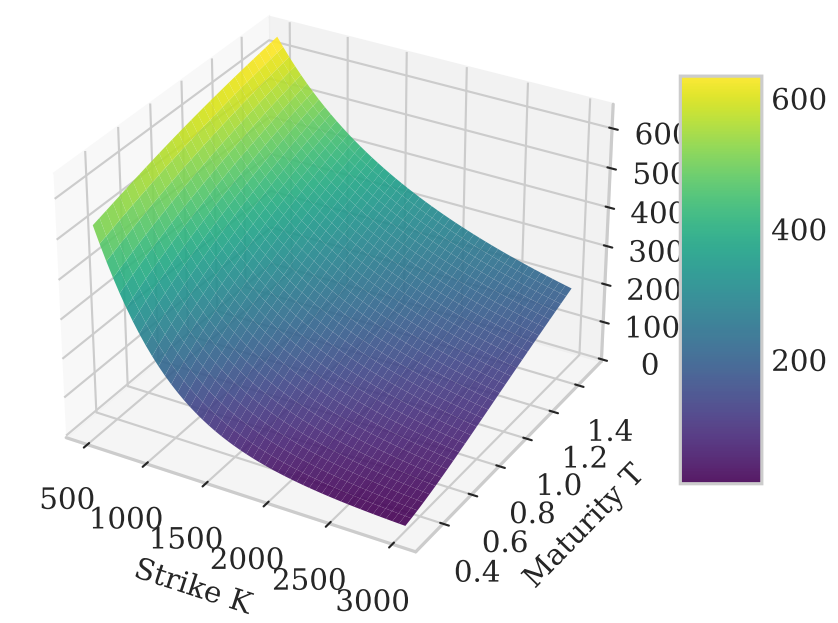


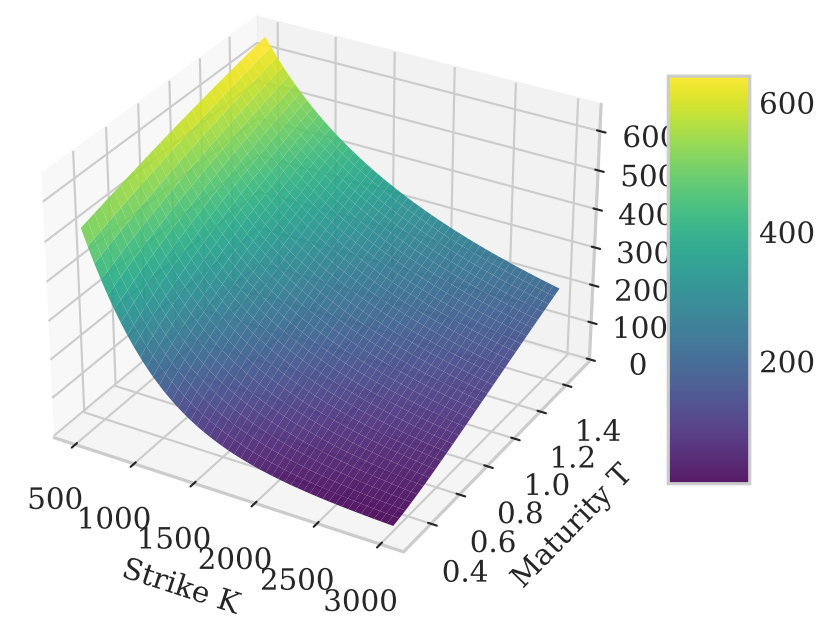
# Neural Network vs Analytical Solution Comparison ( $\sigma = 1.0$ )

## Trained Model vs Black-Scholes

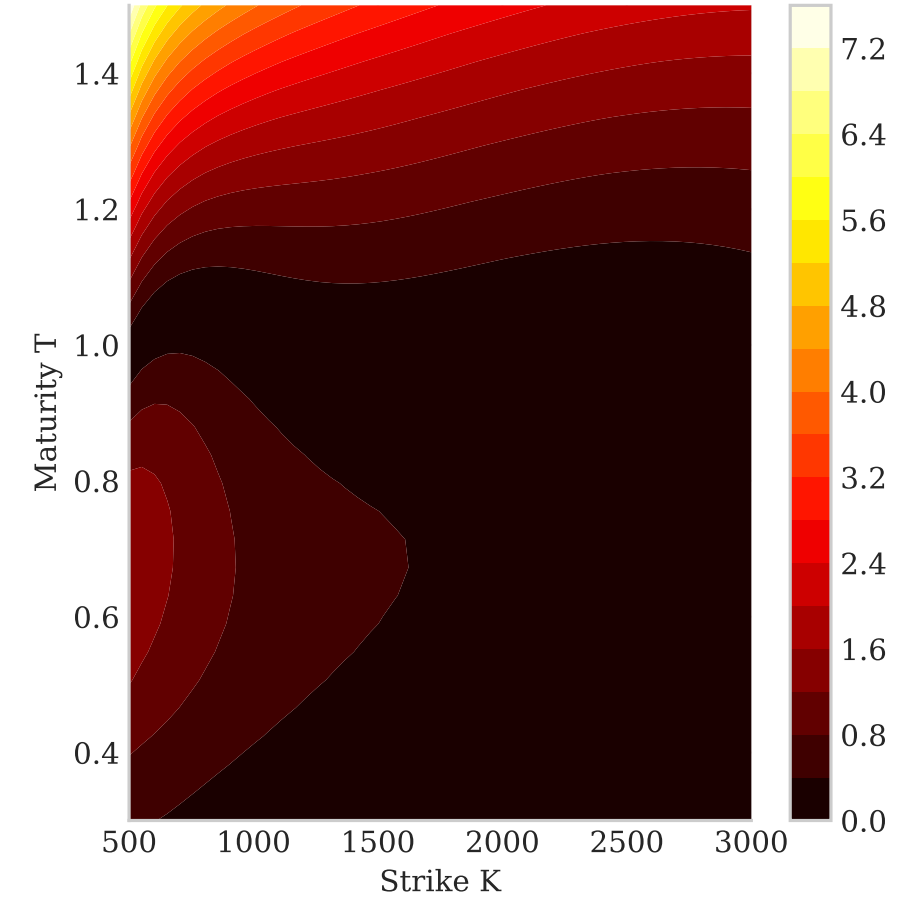
NN Option Prices  $C_{NN}(K,T)$



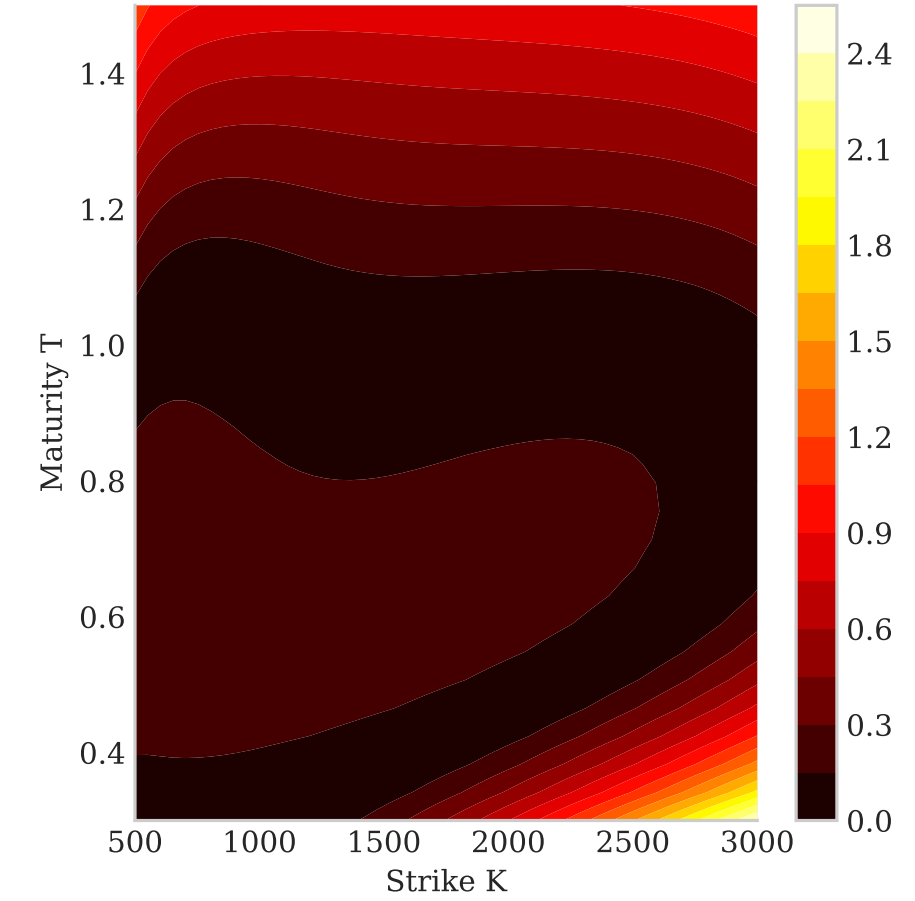
Black-Scholes  $C_{BS}(K,T)$



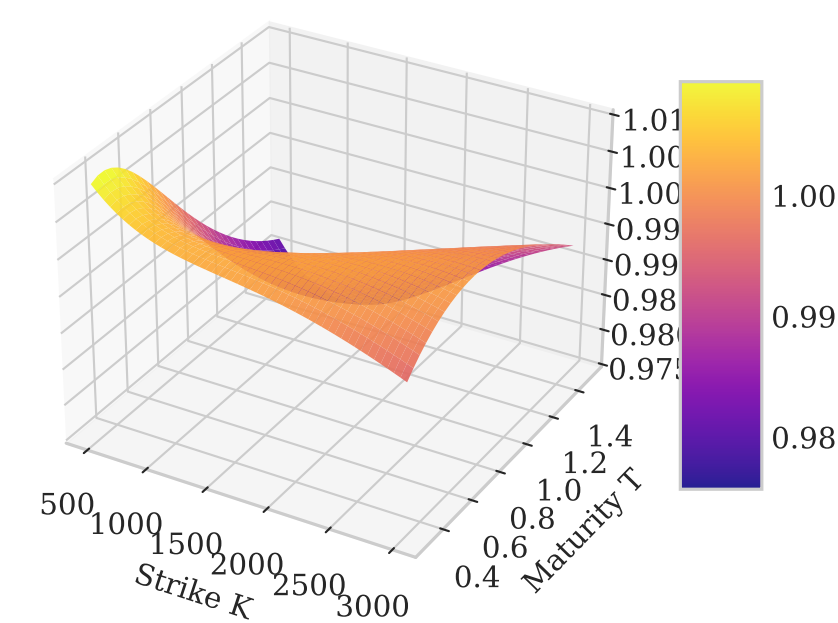
Absolute Error  $|C_{NN} - C_{BS}|$   
RMSE = 1.2566



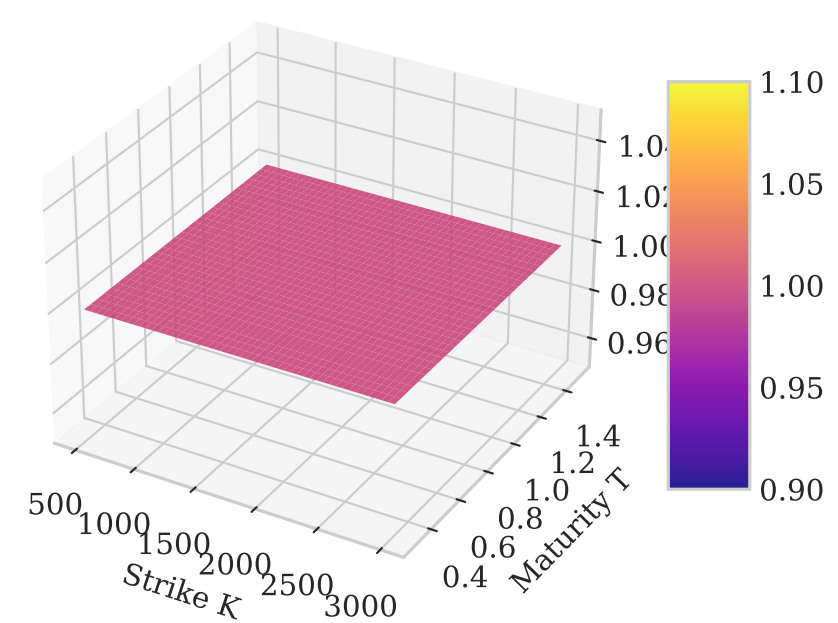
Relative Error (%)  
Mean = 0.31%



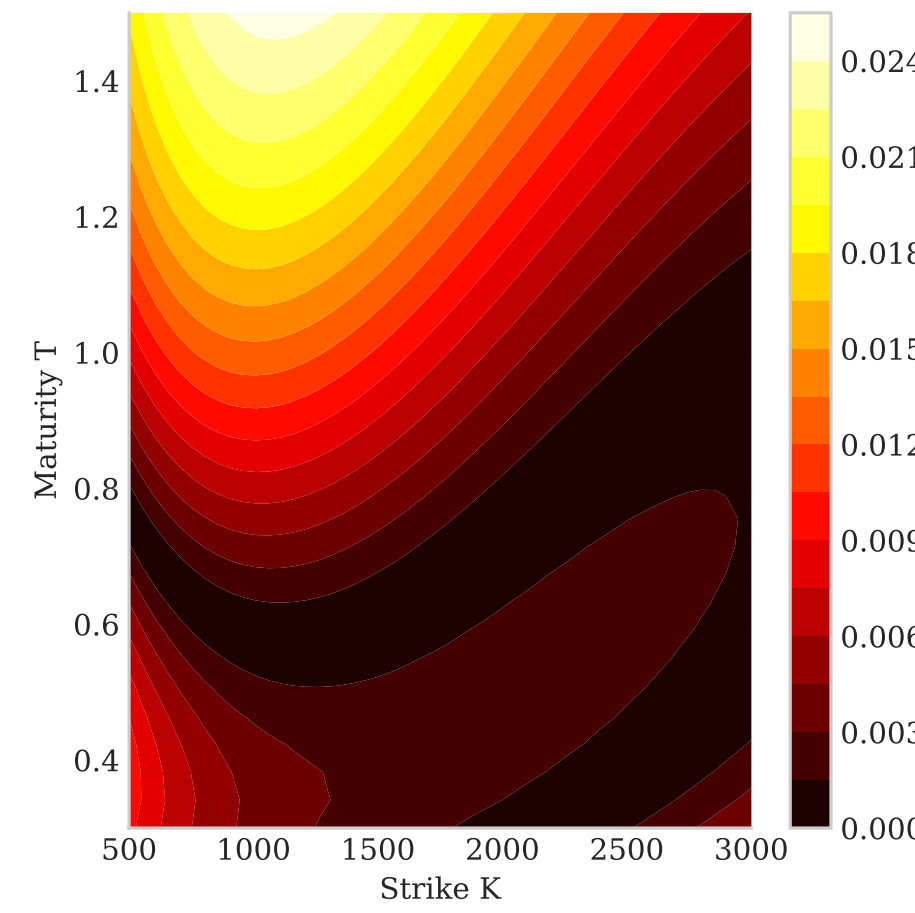
NN Local Volatility  $\sigma_{NN}(K,T)$



Constant Volatility  $\sigma = 1.0$



Volatility Error  $|\sigma_{NN} - \sigma|$   
RMSE = 0.0098



Risk-Neutral Densities

