ASSIGNMENT 6

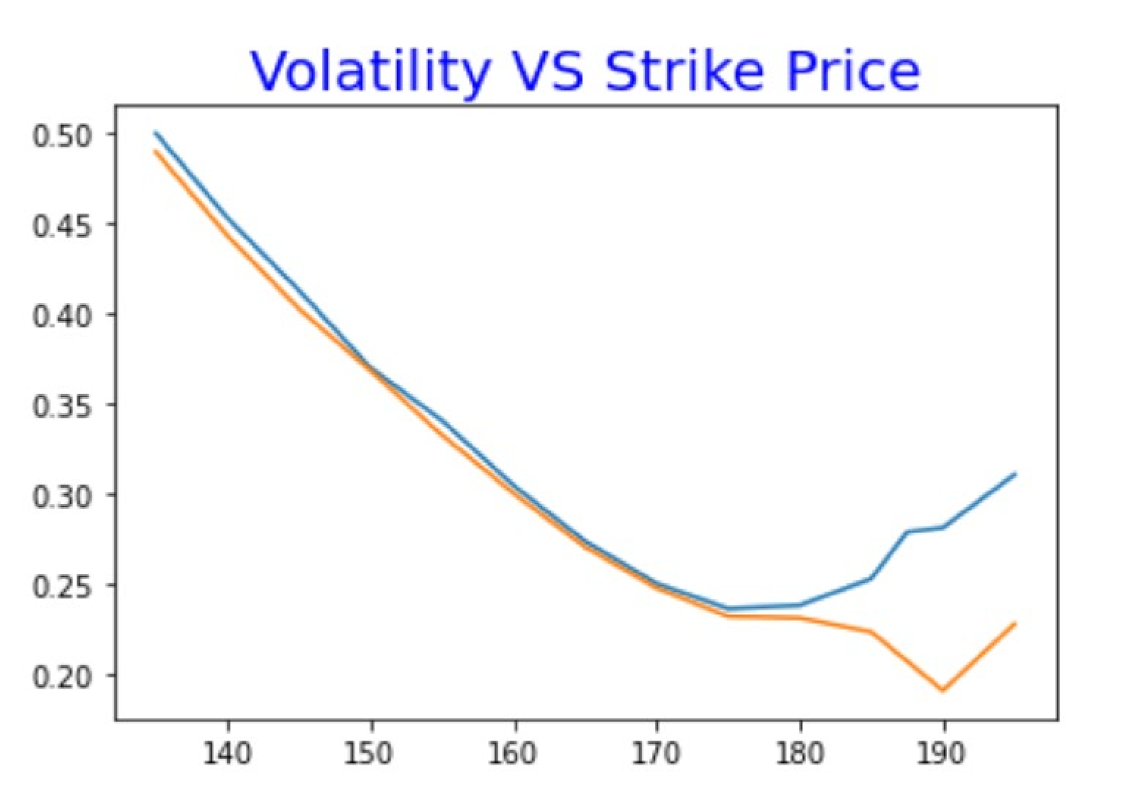
JASON FENG

PROBLEM 1

- GBSM Calculation
- Price increase when volatility increase

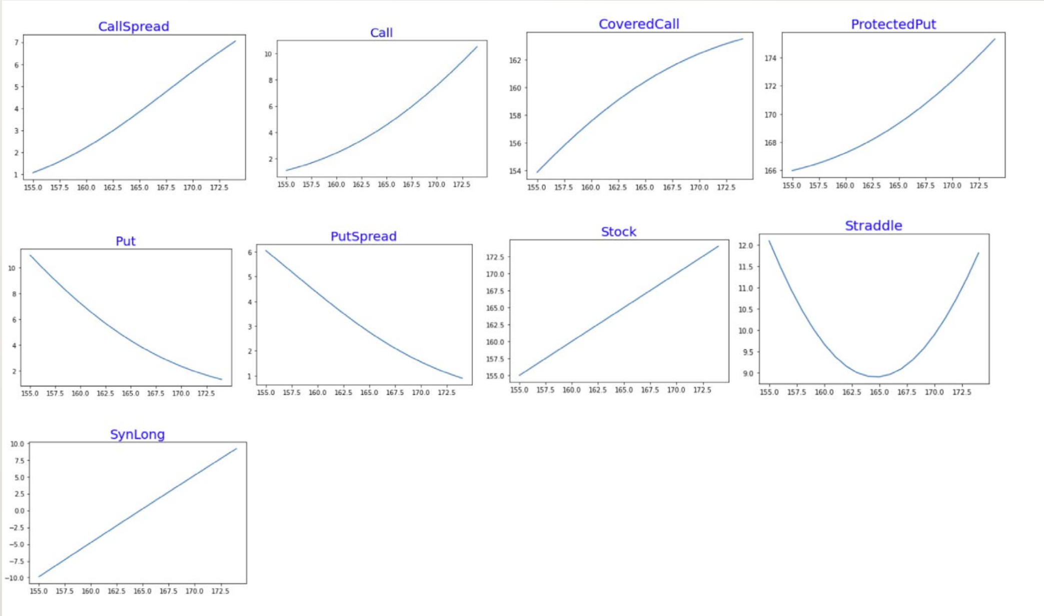
PROBLEM 2

- Split Call and Put
- Calculate Volatility
- Volatility “**Smile**”



PROBLEM 3

- Calculate Holding Value
- Simulation
- Calculate mean, VaR and ES



Portfolio	PnL Mean	5% VaR	5% ES
Call	2.681833	-0.593863	-0.265604
CallSpread	5.136356	-2.201233	-1.765483
CoveredCall	16.313986	-10.908861	-9.987594
ProtectedPut	2.710068	-0.600388	-0.270919
Put	-1.922085	2.627516	2.702048
PutSpread	0.493284	0.467263	0.567195
Stock	4.632152	-1.314998	-0.721990
Straddle	0.759749	0.120747	0.185467
SynLong	9.559749	-8.679253	-8.614533