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| [InterviewQs](http://url4828.interviewqs.com/ls/click?upn=qwT-2Bl0U064-2B7oRNpPgUya7ecPmGRwE2khpP-2F5cNr-2FmX-2B6PqYxRHzWlRa-2B8ecgLBA9-2BqgBN6N-2BlN6LynvPDDX8gP5GJnL7P-2FdFw86KOd0IkE-3D6BqE_IX5HKWnhXeILdZHF1orS-2BlB9GK8lB7SYfPoy-2FMuH4KRohMZLpajhsnIOVcXh9Dl1-2FEM0gexeUVi2uV8saiYk-2BIoemGnh34m-2BtT-2BROOE0Lc-2Bkopd6Z27bKGuv7dOuQ73sXkNsOgMybAyt1cBiJAwdfrsAeeJh5bJa8Hot90W16qZ7R-2BtpW-2FgA186GOcU67cb6a75D8wYbn9aMPvTI1YEzzLBOEoMHVAqjHrYT7vKR2ZaJq-2FT5L7Wy6wI-2BcRbFV9dSKbL8SLRf2lNcpxIdj4o3p6SjWqnsiDa4z1L8O2bZqq1Dbyz-2F4fAuwwyhttBgmhBEwVxLpfGfae6vRUt64g9iRNhUC6EVjwkSr7UFvS6wEesHRfeYeuLsdEGOjVVgNCRH) |

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| **Simulating future stock prices using Monte Carlo methods** |

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| ***Data Analysis, Python, Pandas, Data Manipulation, Monte Carlo Simulation, External Dataset*** |

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| Using Monte Carlo methods, simulate future stock price outcomes for Apple ($AAPL) using Python. You can read more about Monte Carlo simulation (in a finance context) [here](http://url4828.interviewqs.com/ls/click?upn=qwT-2Bl0U064-2B7oRNpPgUyaxLnv394QhRsufUUKOJx9boPP0tnbz9-2FSOfYEqrS8C-2FtDIqx0m2wJ5LAXFP2330BY-2FNOaz-2BHxVo3OhEmK177rUY-3DhRAG_IX5HKWnhXeILdZHF1orS-2BlB9GK8lB7SYfPoy-2FMuH4KRohMZLpajhsnIOVcXh9Dl1-2FEM0gexeUVi2uV8saiYk-2BIoemGnh34m-2BtT-2BROOE0Lc-2Bkopd6Z27bKGuv7dOuQ73sXkNsOgMybAyt1cBiJAwdfrsAeeJh5bJa8Hot90W16qZ7R-2BtpW-2FgA186GOcU67cb6a75D8wYbn9aMPvTI1YEzzLBOEoMHVAqjHrYT7vKR2Za8IxYyAnglXSMSLiCIIxvH-2BgcrmtIq5beA5uoByReKbkbZKfYybVWZ6-2B4SKPUWYvB704dexNCvYXBstC6EvTSoBaN792zMgc7X2HYjSe1hxxTWCw-2B-2B6UmJf3L-2F5tuJ5pyc-2FeT1wc5rvWdi6xECs-2BQw).  Below is code using Python to grab the initial stock price data for Apple, to help get you started:    import math    import matplotlib.pyplot as plt    import numpy as np    from pandas\_datareader import data    apple = data.DataReader('AAPL', 'yahoo',start='1/1/2009')    apple.head()     |  | **High** | **Low** | **Open** | **Close** | **Volume** | **Adj Close** | | --- | --- | --- | --- | --- | --- | --- | | **Date** |  |  |  |  |  |  | | **2009-01-02** | 13.005714 | 12.165714 | 12.268572 | 12.964286 | 186503800.0 | 11.357091 | | **2009-01-05** | 13.740000 | 13.244286 | 13.310000 | 13.511429 | 295402100.0 | 11.836406 | | **2009-01-06** | 13.881429 | 13.198571 | 13.707143 | 13.288571 | 322327600.0 | 11.641174 | | **2009-01-07** | 13.214286 | 12.894286 | 13.115714 | 13.001429 | 188262200.0 | 11.389630 | | **2009-01-08** | 13.307143 | 12.862857 | 12.918571 | 13.242857 | 168375200.0 | 11.601127 | |