Abstract

Bitcoin is one of the cryptocurrency in demand to be an investment medium in achieving financial returns. Although investing using Bitcoin is very popular, this type of investment has risks that need to be considered. To anticipate risks in investing using Bitcoin, a trading system is needed to trade automatically. The system is built using two computational methods, namely Recurrent Neural Network and Reinforcement Learning method which is then called Recurrent Reinforcement Learning. This method requires the right parameter values to maximize the sharpe ratio value. Sharpe ratio values are used to measure excess returns, or risk premiums, per unit deviation in investment assets or trading strategies. In this final project research, an analysis of parameters that affect system performance is carried out. The results obtained from the analysis that has been done states that the system gets a sharpe ratio value of 0,10963. The value of the sharpe ratio obtained is still relatively high because an investment is considered low risk if the value of the sharpe ratio is one and above.

Keywords: Bitcoin, Trading, Recurrent Reinforcement Learning, RRL