**Trading Algorithm Project**

**Strategy Type**: High frequency trading strategy

**Time frame**: 30 minutes

**Description**: When the price moves 2 standard deviations below or above its average and the pair is oversold or overbought and there is a current trend we buy and sell respectively until the price returns to its average or it drops below a percentage of the original price.

**Metrics**:

* Cumulative Return
* Annualised Return
* (maximise)
* Maximum Drawdown (largest peak-to-trough decline in the portfolio’s value)
* Volatility / sd
* (minimise)
* Sharpe ratio ( (portfolio return – risk free rate) / sd of portfolio returns)
* Sortino ratio (better measures downside risk, is instead divided by sd of negative returns)

(higher ratio indicates better risk-adjusted returns) (maximise)

* Winning rate
* Average Trade return
* (maximise)

**To do**:

* Optimise parameters (using reinforcement learning)

**Pairs:** “XAUUSD”, “GBPUSD”, “EURGBP”, “AUDNZD”, “CADJPY”, “GBPCHF”

These pair were chosen on the basis that they have recently shown strong trends and that for a pair “XXXPRR” , most pairs “YYYPRR” will act similarly