Hyperparameter tuning logs

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This log accompanies the `QGAN.ipynb` notebook and was used to keep track of the various hyperparameter configurations attempted and the results they generated. The parameters are in the following order:

```
- (input_price_data_length, prediction_vector_length)
- num. of qubits
- noise boolean
- num. of layers plus type of ansatz -- SEL: StronglyEntanglingLayers (PL template) ; BEL: BasicEntangli
ngLayers (PL template)
- data encoding method
- classical discriminator config
- num. of epochs
- num. of data samples learned
```

QGAN hyperparameter configuration results

Notes/Metric charts	QGenerator size	Noise?	QGenerator ansatz	Data embedding	Classical discriminator	LR	Epochs	Data pool size	Converge?
#1	(15+4) 15 qubits	☐	3 layers SEL	Amplitude embedding	Adaptive LR CNN ReLU		5,500	1	☑
#2	(15+4) 15 qubits	☐	3 layers SEL	Amplitude embedding	Adaptive LR CNN ReLU		5,500	2	☑
#3	(15+4) 8 qubits	☐	3 layers SEL	Repeat angle embedding	CNN ReLU	0.01	5,500	1	☐
#4	(15+4) 15 qubits	☐	2 layers SEL	Amplitude embedding	Adam w/ momentum CNN Leaky ReLU	0.0001	1,500	5	☐
#5	(15+4) 15 qubits	☐	2 layers SEL	Amplitude embedding	Adam w/ momentum CNN Leaky ReLU	0.0001	4,500	1	☑
#6	(15+4) 15 qubits	☐	3 layers SEL	Amplitude embedding	Adam w/ momentum Adaptive LR CNN Leaky ReLU			1	☐
#7	(15+4) 15 qubits	☐	3 layers SEL	Amplitude embedding	Adam w/ momentum CNN Leaky ReLU	0.0001	4,000	2	☑
#8	(8+2) 10 qubits	☑	3 layers SEL	Amplitude embedding	Adam w/ momentum CNN Leaky ReLU	0.0001	5,500	1	☑
#9	(15+4) 15 qubits	☐	3 layers BEL	Amplitude embedding	CNN Leaky ReLU	0.0001	5,000	1	☑

This log accompanies the `A simple qnn to evaluate capacity of ansatzes.ipynb` notebook. Given 3 layers of the SEL ansatz structure, we attempt to evaluate the maximum number of data samples the variational circuit is able to learn. All configurations are initialized as follows:

```
- (15+4)
- 15 qubits
- no noise
- 3 SEL ansatz
- amplitude embeddings
```

QNN to evaluate ansatz capacity results

Notes/Metric charts	Data embedding	Epochs	Data pool size	Converge?
#1	Amplitude embedding	3,000	1	☑
#2	Amplitude embedding	3,000	2	☑
#3	Amplitude embedding	3,000	3	☑