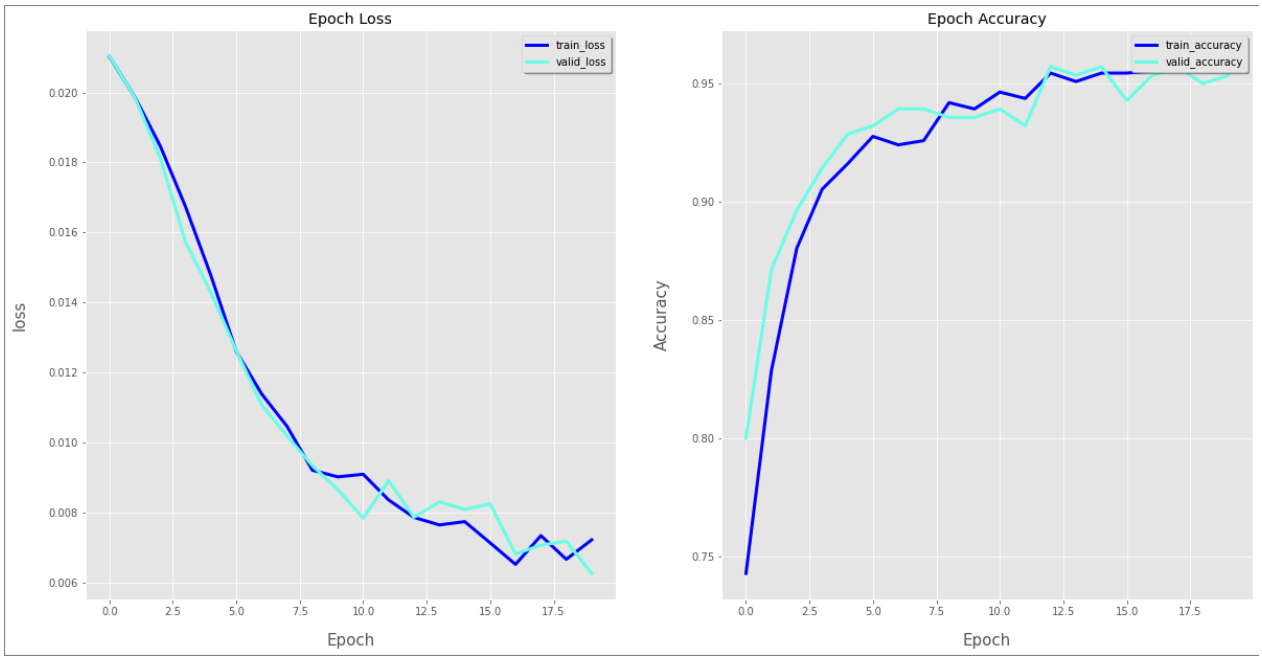
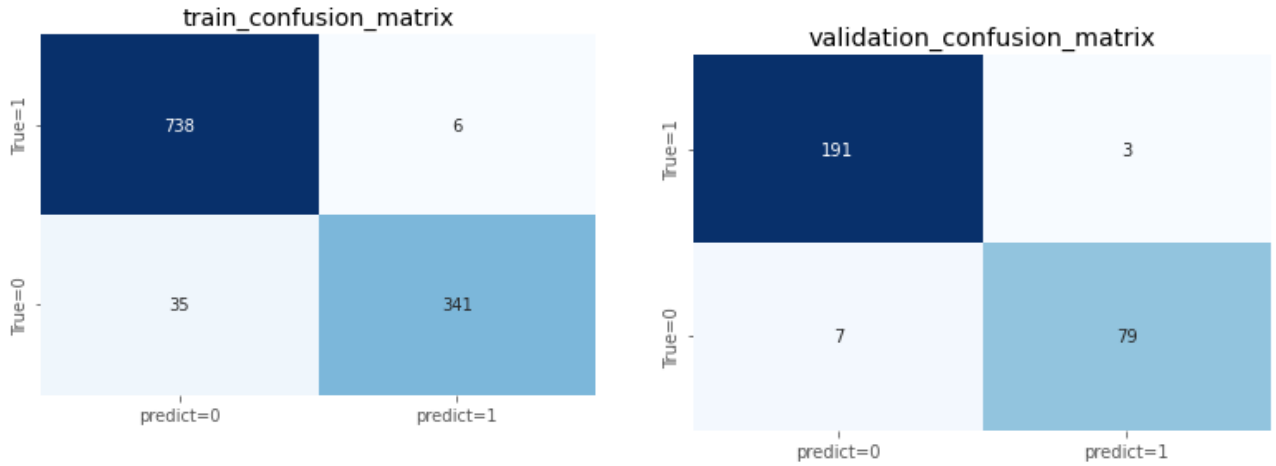
(i)



(ii)



(iii)

Train Performance:

	precision	recall	f1-score	support
class 0	0.95	0.99	0.97	744
class 1	0.98	0.91	0.94	376
accuracy			0.96	1120
macro avg	0.97	0.95	0.96	1120
weighted avg	0.96	0.96	0.96	1120

Valid Performance:

	precision	recall	f1-score	support
class 0	0.96	0.98	0.97	194
class 1	0.96	0.92	0.94	86
accuracy			0.96	280
macro avg	0.96	0.95	0.96	280
weighted avg	0.96	0.96	0.96	280

(iv)
Random Forest由多個Decision Tree組成，Random Forest是把資料集取出多個樣本訓練出多個tree，因為取出的樣本會放回母體，所以可能會有部分資料重複。而Decision Tree是透過訓練集的特徵學一堆問題來推論分類，因此不會有資料重複。所以在資料量相對少的情況下可能Decision Tree的表現會稍微比Random Forest佳，因Random Forest有資料重複訓練
(v)

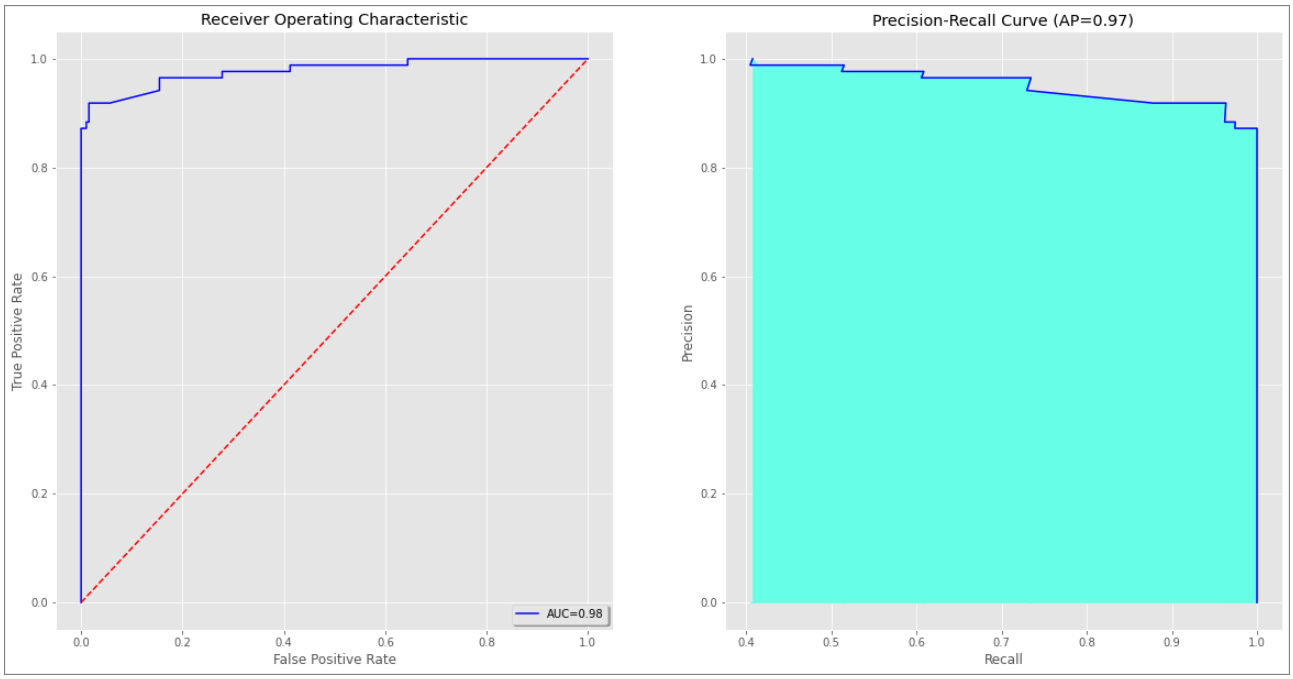
DecisionTree Performance:

	precision	recall	f1-score	support
class 0	0.99	1.00	1.00	194
class 1	1.00	0.99	0.99	86
accuracy			1.00	280
macro avg	1.00	0.99	1.00	280
weighted avg	1.00	1.00	1.00	280

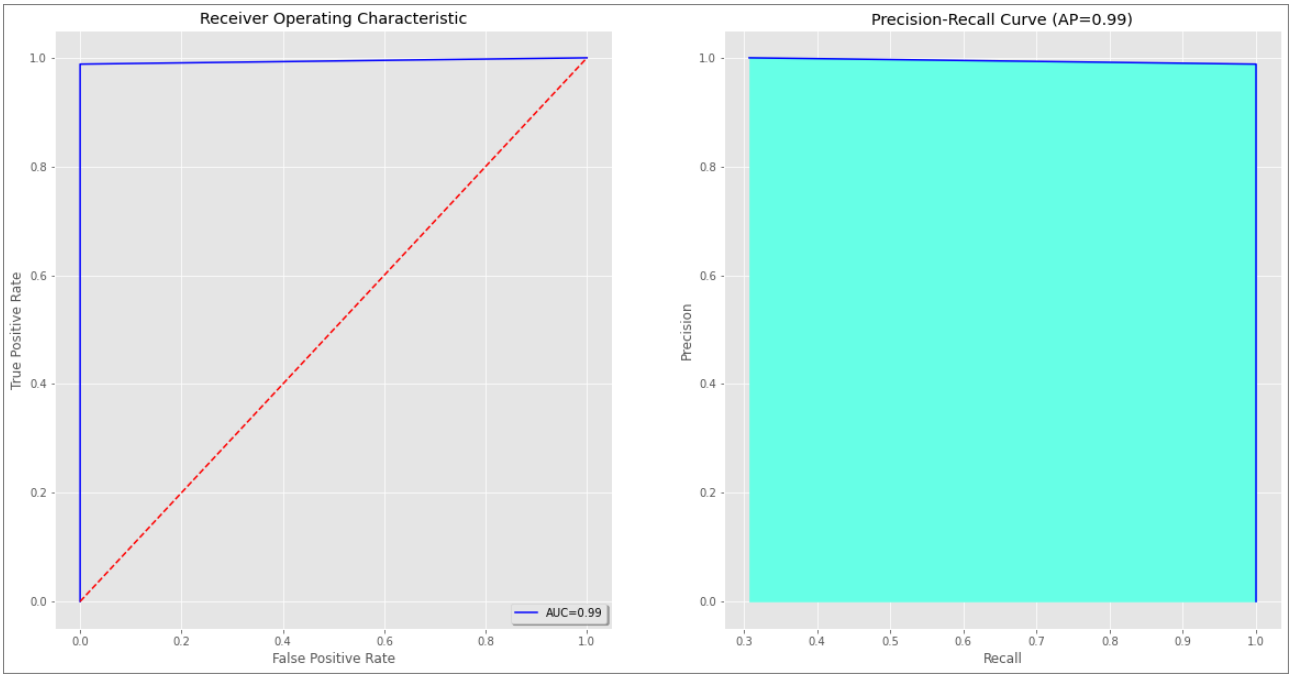
Random Forest Performance:

	precision	recall	f1-score	support
class 0	0.99	1.00	0.99	194
class 1	1.00	0.98	0.99	86
accuracy			0.99	280
macro avg	0.99	0.99	0.99	280
weighted avg	0.99	0.99	0.99	280

(vi)
1.DNN



2.Decision Tree



3.Random Forest