

# Exploring dollar bills

You will practice building classification models in Keras with the **Banknote Authentication** dataset.

Your goal is to distinguish between real and fake dollar bills. In order to do this, the dataset comes with 4 variables: `variance`, `skewness`, `kurtosis` and `entropy`. These variables are calculated by applying mathematical operations over the dollar bill images. The labels are found in the `class` variable.



The dataset is pre-loaded in your workspace as `banknotes`, let's do some data exploration!

- Import `seaborn` as `sns`.
- Use `seaborn's pairplot()` on `banknotes` and set `hue` to be the variable containing the labels.
- Generate descriptive statistics for the banknotes authentication data.
- Count the number of observations of each class.

```
# Import seaborn
```

```
import seaborn as sns
```

```
# Use pairplot and set the hue to be our class
```

```
sns.pairplot(banknotes, hue="class")
```

```
# Show the plot
```

```
plt.show()
```

```
# Describe the data
```

```
print('Dataset stats: \n', banknotes.describe())
```

```
# Count the number of observations of each class
```

```
print('Observations per class: \n', banknotes["class"].value_counts())
```