Code Highlight Example

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1 Inline Code

Python code: `import numpy as np`

Matlab code: `function pop = initpop(popsize, chromlength)`

2 Code Block

2.1 Python Code Block

```python
from numpy import *

class KalmanFilter(object):

    def __init__(self):
        print('successfully called')

    def predict(self, x0, P0, u0, A, B, Q):
        x_predict = dot(A, x0) + dot(B, u0)
        P_predict = dot(A, dot(P0, A.T)) + Q
        return(x_predict,P_predict)

    def kf_update(self, x_predict, P_predict, z, H, R):
        K = dot(P_predict, dot(H.T, linalg.inv(dot(H, dot(P_predict
    , H.T)) + R )))
        x = x_predict + dot(K, (z - dot(H, x_predict)))
        P = P_predict - dot(K, dot(H, P_predict))
        return (x, P)

    # 1 dimension case
    def simple_predict(self, x0, P0, u0, A, B, Q):
        x_predict = dot(A, x0) + dot(B, u0)
        P_predict = dot(A, dot(P0, A)) + Q
        return(x_predict,P_predict)

    # 1 dimension case
    def simple_update(self, x_predict, P_predict, z, H, R):
        K = dot(P_predict, dot(H, 1 / (dot(H, dot(P_predict, H)) +
    R )))
        x = x_predict + dot(K, (z - dot(H, x_predict)))
        P = P_predict - dot(K, dot(H, P_predict))
        return (x, P)
```

2.2 Matlab Code Block

```
function y = diffeqn(a,x,yn1)
    y = zeros(1, length(x));
    y(1) = a .* yn1 + x(1);
    for n = 2:length(y)
        y(n) = a.*y(n-1) + x(n);
    end
```

3 Code Environment

```
# encoder -> decoder
class RNN_lstm(nn.Module):
    def __init__(self, seq_len=188, n_features=1, hidden_size=64):
        super().__init__()
        self.encoder = Encoder(seq_len, n_features, hidden_size)
        self.decoder = Decoder(seq_len, n_features, hidden_size)
    def forward(self, x):
        x = self.encoder(x)
        x = self.decoder(x)
        return x
```