

```
def compute_cov(self, X_std, mean_vec):  
    """  
    Covariance using mean, (don't use any numpy.cov)  
    :param X_std:  
    :param mean_vec:  
    :return n X n matrix:: covariance matrix  
    """  
  
    # your code here  
  
    n = X_std.shape[0]  
    new_X = X_std - mean_vec  
  
    return np.dot(np.transpose(new_X), new_X) / (n-1)
```