

**Machine Learning for Time Series**  
***Time warp invariant kSVD:***  
***Sparse coding and dictionary learning for time series under time warp***

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## **I. Introduction**

We're gonna talk about [1].

## **II. Models**

### **II.1. Sparse coding**

#### **II.1.1 Orthogonal Matching Pursuit**

#### **II.1.2 TWI Orthogonal Matching Pursuit**

### **II.2. Dictionnary learning**

#### **II.2.1 $k$ -SVD**

#### **II.2.2 TWI $k$ -SVD**

## **III. Experimental setup**

### **III.1. Dataset**

### **III.2. Evaluation metrics**

## **IV. Results**

## **V. Conclusion**

## **References**

- [1] SAEED, V. Y., AND DOUZAL-CHOUAKRIAA, A. Time warp invariant ksvd: Sparse coding and dictionary learning for time series under time warp. [1](#)