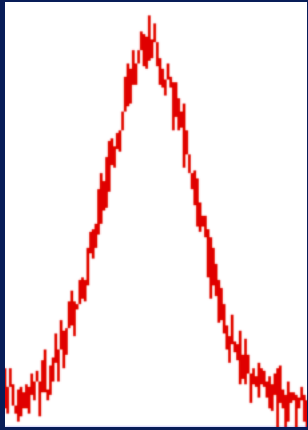


# Feature Transformation

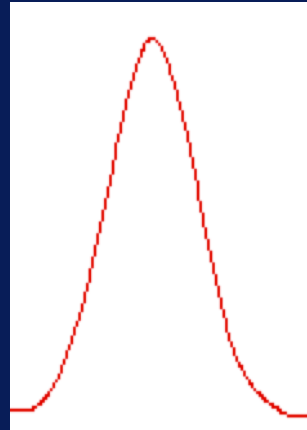
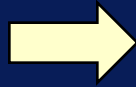
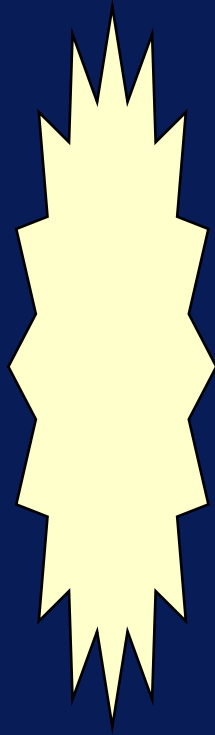
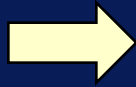
# After this video you will be able to..

- Articulate the purpose of feature transformation
- List three feature transformation operations
- Discuss when scaling is important

# Feature Transformation



**Original  
Data**



**Transformed  
Data**

# Scaling

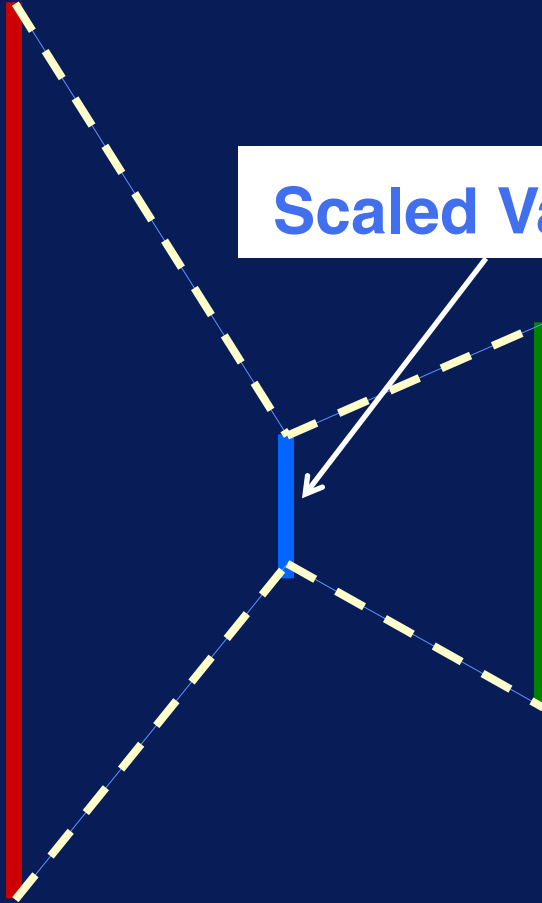


**Weight**

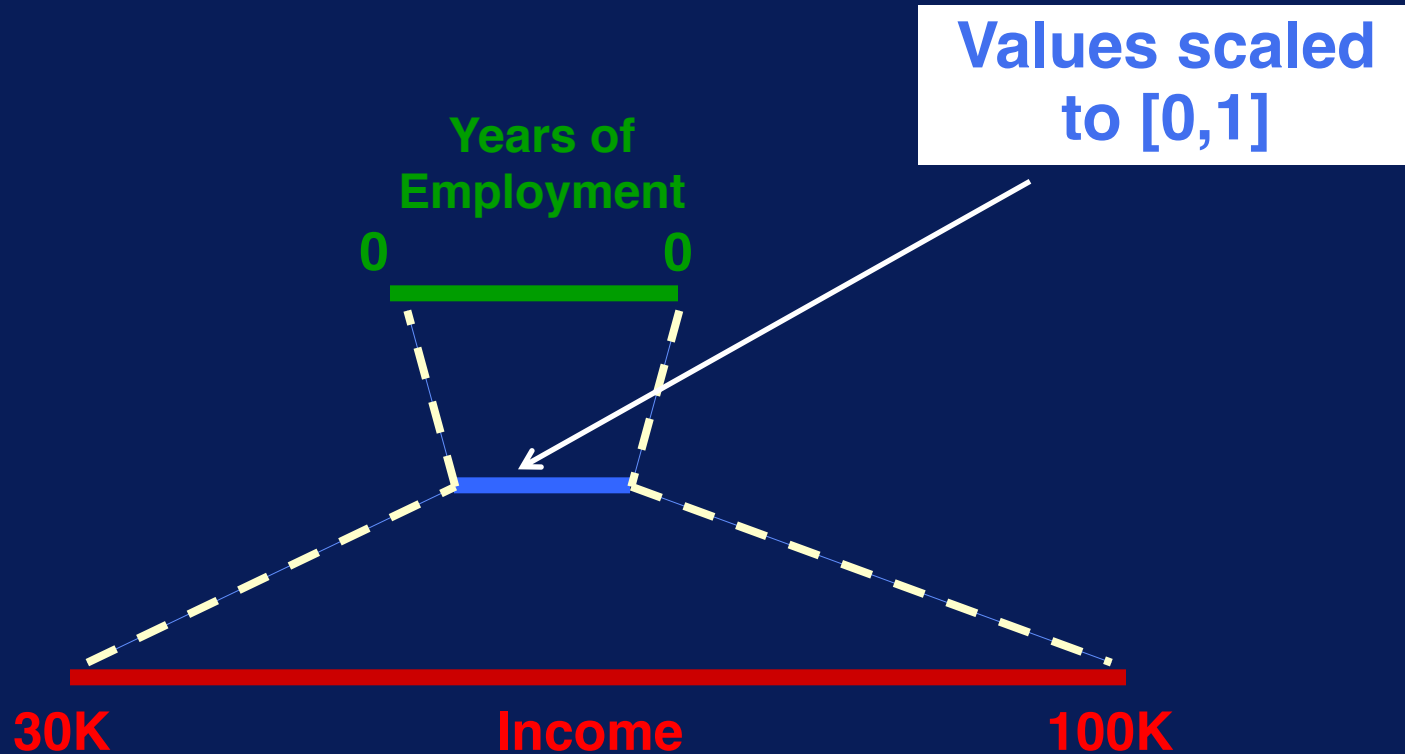
**Scaled Values**



**Height**



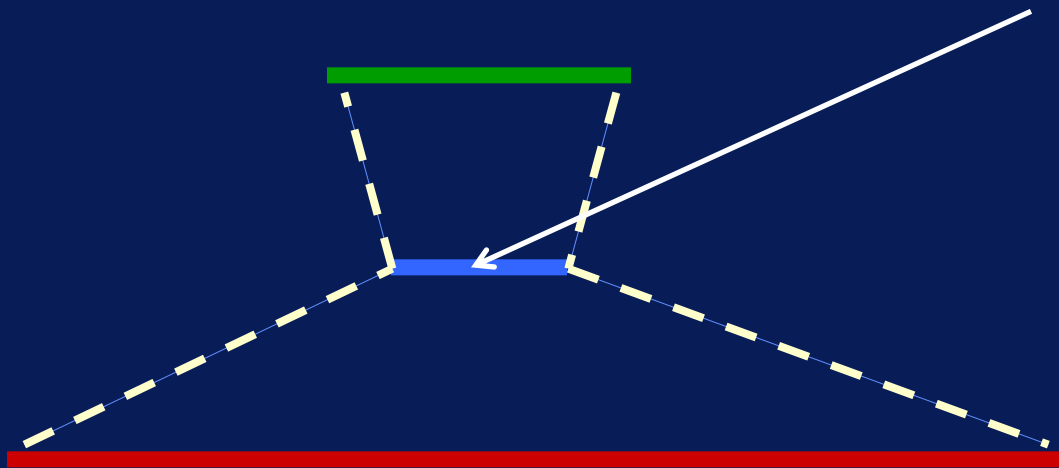
# Scaling to a Range



# Zero-Normalization / Standardization

Mean = 0

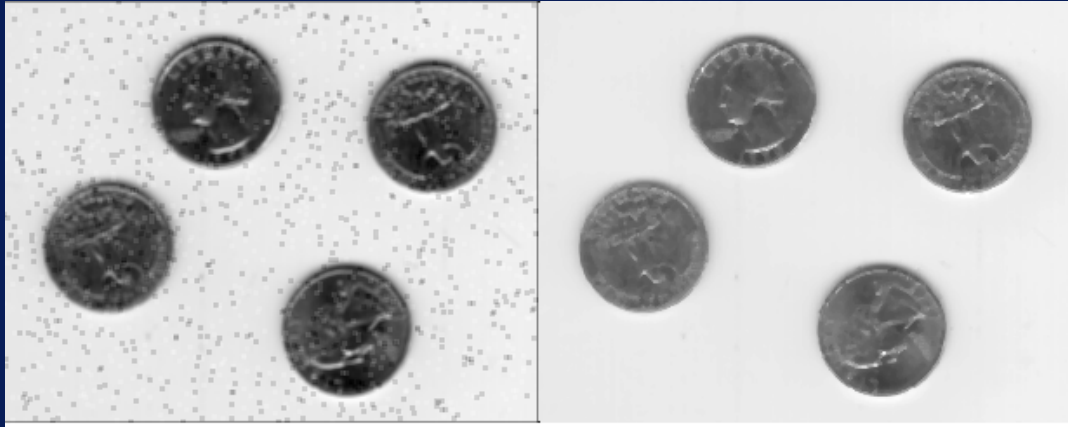
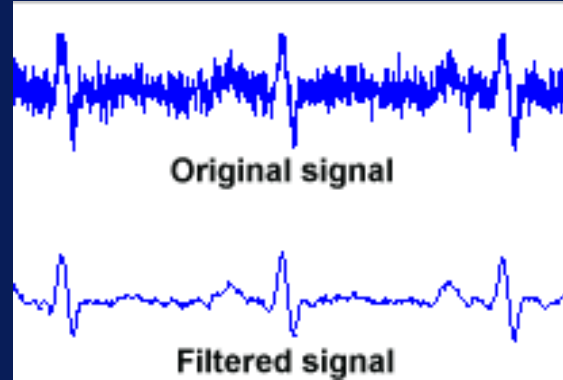
Standard Deviation = 1



# Filtering

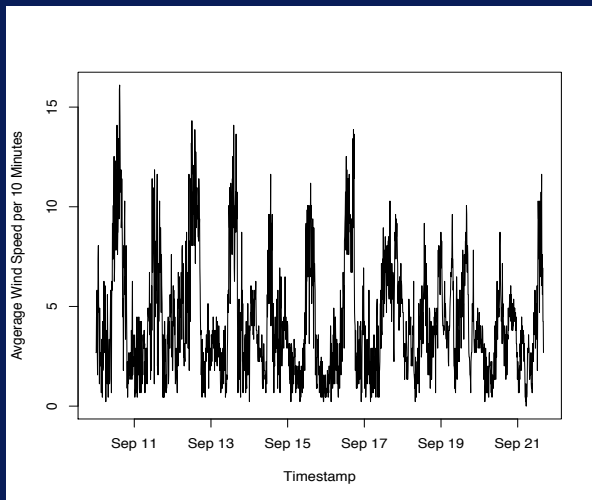
Filter noise from audio signal

Remove grainy  
appearance in images

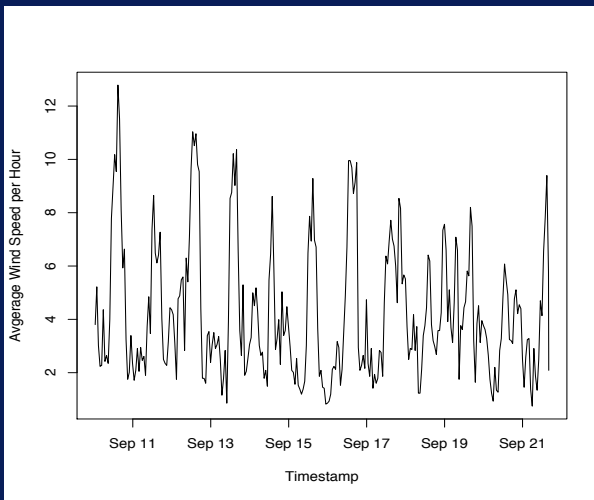


# Aggregation

Avg Wind Speed  
(every 10 minutes)



Avg Wind Speed  
(every 60 minutes)





# Feature Transformation

- **What:** Map feature values to new set of values
- **Why:** Have data in format suitable for analysis
- **Caveat:** Take care not to filter out important characteristics of data