

FEATURE-LEVEL DOMAIN ADAPTATION

WM Kouw JH Krijthe M Loog LJP van der Maaten

FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**

FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**

FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**
- **There are however problems where this assumption is not valid:**

FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**
- **There are however problems where this assumption is not valid:**
 - Patients scanned by different MRI scanners.

FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**
- **There are however problems where this assumption is not valid:**
 - Patients scanned by different MRI scanners.
 - Genomes sequenced under different laboratory conditions.

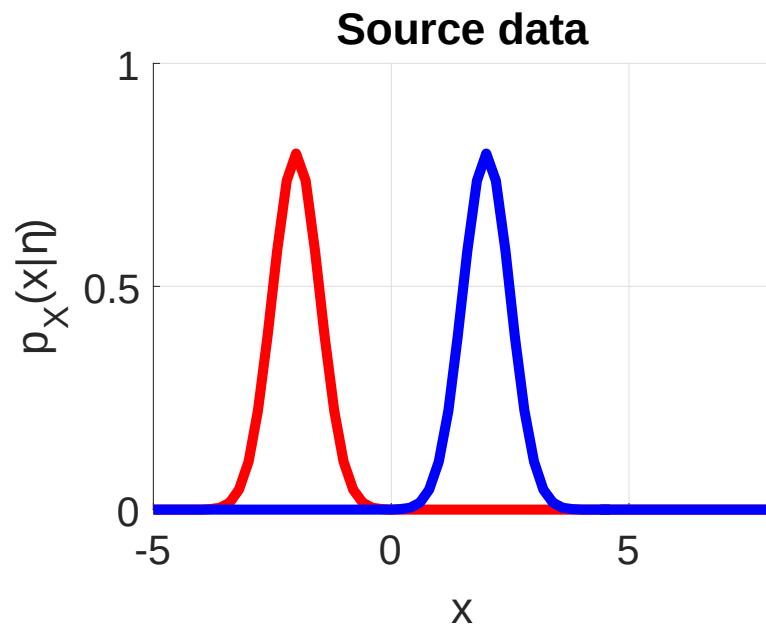
FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**
- **There are however problems where this assumption is not valid:**
 - Patients scanned by different MRI scanners.
 - Genomes sequenced under different laboratory conditions.
 - Natural language text collected through different online media.

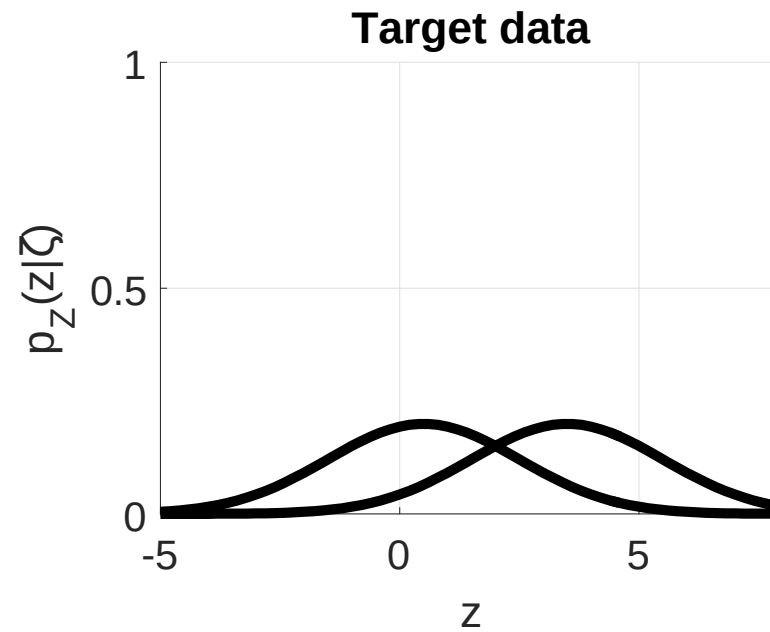
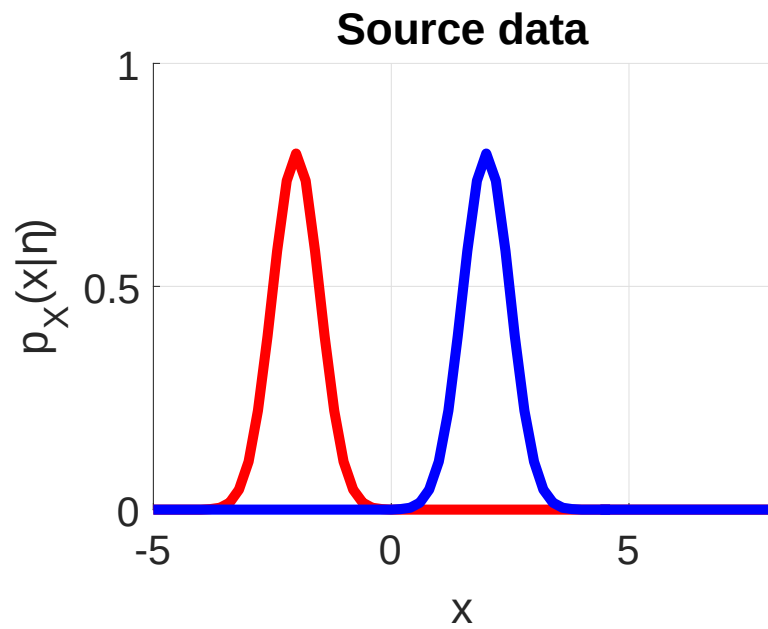
FEATURE-LEVEL DOMAIN ADAPTATION

- **Pattern recognition algorithms learn from examples and classify new data.**
- **Usually, one assumes that the training and test data are samples from the same distribution.**
- **There are however problems where this assumption is not valid:**
 - Patients scanned by different MRI scanners.
 - Genomes sequenced under different laboratory conditions.
 - Natural language text collected through different online media.
 - Objects photographed by different camera's.

FEATURE-LEVEL DOMAIN ADAPTATION



FEATURE-LEVEL DOMAIN ADAPTATION



FEATURE-LEVEL DOMAIN ADAPTATION

- **We developed an approach that fits explicit transfer models to the data.**

FEATURE-LEVEL DOMAIN ADAPTATION

- We developed an approach that fits explicit transfer models to the data.
- These transfer models can be incorporated in the classifier to adapt it to classifying target data.

FEATURE-LEVEL DOMAIN ADAPTATION

- We developed an approach that fits explicit transfer models to the data.
- These transfer models can be incorporated in the classifier to adapt it to classifying target data.
- Want to find out more? Visit my poster.