

Learning: Nearest Neighbor

Artificial Intelligence

CMSC 25000

January 31, 2002

Agenda

- Machine learning: Introduction
- Nearest neighbor techniques
 - Applications: Robotic motion, Credit rating
- Efficient implementations:
 - k-d trees, parallelism
- Extensions: K-nearest neighbor
- Limitations:
 - Distance, dimensions, & irrelevant attributes

Machine Learning

- Learning: Acquiring a function, based on past inputs and values, from new inputs to values.
- Learn concepts, classifications, values
 - Identify regularities in data