

CSDS 440: Assignment 3

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Problem 11

A preference bias is an inductive bias where some hypothesis are preferred over others.

- Pros: By using prior knowledge, it allows the learner to work within a complete hypothesis space that is assured to contain the unknown target function.
- Cons: We must have correct prior knowledge about hypothesis space. Otherwise, we may miss the target function.

A restriction bias is an inductive bias where the set of hypothesis considered is restricted to a smaller set.

- Pros: By restrict hypothesis space, we may need less time and effort to search entire hypothesis space.
- Cons: It strictly limits the set of potential hypotheses, which may bring the possibility of excluding the unknown target function altogether.