Weekly report of lessons

Name: Suryam Arnav Kalra
Roll No: 19CS30050
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The topics covered:

- Problems with Find-S
- Consistent Hypothesis
- Agnostic Hypothesis
- Version Space
- List-Then-Eliminate Algorithm
- Compact Representation of Version Space
- Candidate Elimination Algorithm

Summary topic wise:

- Problems with Find-S: There are many cons of this algorithm which are that it does not take into account any of the negative examples and simply picks up the maximally specific hypothesis.
- Consistent Hypothesis: A hypothesis h is said to be consistent if h(x) = c(x) for each training example <x, c(x)> in D.
- Agnostic Hypothesis: A hypothesis h is said to be agnostic if h(x) != c(x) for at least one training example <x, c(x)> in D.
- Version Space: The subset of hypothesis h from H consistent with D.
- List-Then-Eliminate Algorithm: List all of the hypothesis present in H, and then remove from version space any hypothesis which does not fit well with any of the training examples.
- Compact Representation of Version Space: The general boundary (G) => the set of its maximally general members consistent with D. The specific boundary (S) => the set of its maximally specific members consistent with D.
- Theorem: Every member of the version space lies between the S, G boundary.
- Candidate-Elimination Algorithm: For each training example present in D, we try to fine tune the S, G boundary based on whether the training example is positive or negative.

Concepts challenging to comprehend:

Candidate-Elimination Algorithm is a little bit challenging to comprehend.

Interesting and exciting concepts:

The different types of algorithms to find the hypothesis best suiting our training examples are quite exciting to learn.

Concepts not understood:

After going through the book and the video lectures the concepts are clearly understood.

Any novel idea of yours out of the lessons:

These different types of algorithms with varying efficiencies can be used for Concept Based Learning to handle variety of decisions made on a daily basis to lead a better life.