

COMS 3007

Tutorial 1

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1.
 - (a) Supervised learning (Classification); this is because we need to teach our algorithm to identify glasses.
 - (b) Reinforcement learning. Because we want to win the game with minimum moves and thus greater reward.
 - (c) Supervised learning (Classification); our algorithm needs to learn the different types of vehicles.
 - (d) Supervised learning (Classification); the judgement of a court case is based on the previous court case's verdict. (Training Data).
 - (e) Supervised learning (Classification); the student will either pass or fail based on the marks they've been getting throughout the semester.
 - (f) Supervised learning (Classification); we first need to know the living conditions of the patient, then we can come up with the best plan.
 - (g) Reinforcement learning. The game should be able to by interacting with the other player.
 - (h) Supervised learning (Regression). BitCoin price is continuous and to predict its price we need to know previous prices.
2. Facebook ads. Facebook shows me ads based on the sites I have been looking and the types of pages I have liked.
3. Pick and Pay Smart shopper. They learn everytime I swipe my smart shopper card what items I like to buy. Sometimes with that information they give me special offers on selected items.

- 4. (a) Physical Classification
 - i. Sound.
 - ii. Teeth.
 - iii. Body size.
 - iv. Eyes.
 - v. Ears.
 - vi. Walk.
 - vii. Face.
 - viii. Posture.
- (b) Image Classification
 - i. Ears.
 - ii. Eyes.
 - iii. Face.
 - iv. Teeth.
 - v. Posture.
- (c) Predicting the flight speed of a bird.
 - i. Size of wings.
 - ii. Distance from the ground.
 - iii. Size of the bird.
 - iv. Size of limbs.