AI Quiz 03

Question 1

- The Tough Machine Learning Course 10-801 is attended by students majoring in ML and some students that don't major in ML. In it only 50% of the ML students and 30% of the non-ML students pass the midterm exam. Unfortunately 60% of the entire class are non-ML students. What is the percentage of ML students among those that actually pass the exam.

Solution

$$P(ML|pass)=[P(pass|ML)xP(ML)]/P(pass)$$

$$= [(0.50x0.4)] \ / \ [(0.5x0.4) + (0.3x0.6)]$$

$$= 0.52$$

- P(ML)=40% as it was mentioned within question that 60% of the entire class are non-ML students
- P(pass) = P(pass|ML)*P(ML) + P(pass|⌐ML)*P(⌐ML) as P(pass) is mainly P(pass^ML) + P(pass ^ ⌐ML) so have just converted that formula as per bayes rule