

**Quiz #1 Rubric**

1. **(1 Point)** What is the formal definition of *machine learning*?

*“A computer program is said to learn from experience  $E$  with respect to some class of tasks  $T$  and performance measure  $P$ , if its performance at tasks in  $T$ , as measured by  $P$ , improves with experience  $E$ .”* - Tom Mitchell

*“The field of study that gives computers the ability to learn without being explicitly programmed”* - Arthur Samuel

2. **(2 Points)** Can you provide two machine learning examples?

Possible answers:

- Web page ranking algorithm
- Spam filtering
- Autonomous cars
- Self-customizing programs (Amazon, Netflix recommendations)
- Image processing/tagging
- Handwriting recognition
- Data mining: anomaly detection, grouping, predictions, etc.

3. **(2 Points)** Define *artificial intelligence* and *data mining*.

Artificial intelligence is intelligence exhibited by machines.

Data mining is the process of discovering patterns, automatically or semi-automatically, in large quantities of data.