

C1_W1 Quiz- Deployment

100%

1/ You've built a new system for making loan approval decisions. For now, its output is not used in any decision making process, and a human loan officer is solely responsible for deciding what loans to approve. But the system's output is logged for analysis. What is this type of deployment called?

- ☐ Red green deployment
- ☐ Blue green deployment
- ☐ Canary deployment
- ☒ **Shadow mode deployment** → Shadow mode is a type of deployment where the ML algorithm runs in parallel with the user but its output isn't used for any decision making.

2/ On a new social media platform, you're rolling out a new anti-spam system to flag and hide spammy posts. Your team decides to roll out the anti-spam filter via a canary deployment, and roll it out to 1% of users initially. Which of these would you advocate?

- ☐ Use a plan to ramp up to more users at a fixed rate: 1% in the first week, 2% in second week, 4% in third, and so on, so that the rollout can be well planned and managed.
- ☒ **Monitor that 1% of users' reaction, and either gradually ramp up (if it's going well) or rollback (if not)**
- ☐ After a successful canary deployment, begin to implement a shadow mode deployment.
- ☐ Monitor that 1% of users' reaction, and if it goes well, flip the switch to send all traffic (100%) to the system.

Hint: A canary deployment allows you to monitor the performance of an algorithm on a subset of all traffic and then either ramp up to more traffic or rollback if an issue is detected.

3/ You're building a healthcare screening system, where you input a patient's symptoms, and for the easy cases (such as an obvious case of the common cold) the system will give a recommendation directly, and for the harder cases it will pass the case on to a team of in-house doctors who will form their own diagnosis independently. What degree of automation are you implementing in this example for patient care?

- ☐ Human only
- ☐ Shadow mode
- ☐ Full Automation
- ☒ **Partial Automation**

Hint: This type of approach offers some automation, but still requires a human in the loop.

4/ You have built and deployed an anti-spam system that inputs an email and outputs either 0 or 1 based on whether the email is spam. Which of these will result in either concept drift or data drift?

- ☒ Spammers trying to change the wording used in emails to get around your spam filter.
- ☐ Cloud computational costs going down, resulting in a lower cost to process each email received.
- ☐ Updating a monitoring dashboard to keep track of new metrics.
- ☐ None of these will result in either concept drift or data drift.

Hint: Changing the wording will result in a concept or data drift.

5/ Which of these statements is a more accurate description of deployment?

- ☐ Because deployment is a high stakes event, it's critical to design the right system, so that immediately after launch it will immediately work reliably and scale effectively.
- ☒ It is an iterative process, where you should expect to make multiple adjustments (such as metrics monitored using dashboards or percentage of traffic served) to work towards optimizing the system.

Hint: Don't plan or expect to perfect the deployment on your first attempt, it's much more reasonable and efficient to iterate on the process and optimize its performance over time.