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Exam Professional Machine Learning Engineer All Questions

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📄 **EXAM PROFESSIONAL MACHINE LEARNING ENGINEER TOPIC 1 QUESTION 16 DISCUSSIO..**

Actual exam question from Google's Professional Machine Learning Engineer

Question #: 16

Topic #: 1

[All Professional Machine Learning Engineer Questions]

You are an ML engineer at a large grocery retailer with stores in multiple regions. You have been asked to create an inventory prediction model. Your model's features include region, location, historical demand, and seasonal popularity. You want the algorithm to learn from new inventory data on a daily basis. Which algorithms should you use to build the model?

- A. Classification

- B. Reinforcement Learning

- C. Recurrent Neural Networks (RNN)

- D. Convolutional Neural Networks (CNN)

**Show Suggested Answer**

by 👤 salsabilsf at *June 5, 2021, 11:10 a.m.*

## Comments

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⊟ 👤 **esuaaaa** 👍 Highly Voted 👍 3 years, 4 months ago

The answer is C. Use RNN because it is a time series analysis.

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⊟ 👤 **george_ognyanov** `Highly Voted 👍` 3 years ago

As Y2Data pointed out, your reasoning for choosing B does not make much sense.

Furthermore, Reinforcement Learning for this question does not make much sense to me. Reinforcement Learning is basically agent - task problems. You give the agent a task i.e. get out of a maze and then through trial and error and many many iterations the agent learns the correct way to perform the task. It is called Reinforcement because you ... well ... reinforce the agent, you reward the agent for correct choices and penalize for incorrect choices. In RL you dont use many / any previous data because the data is generated with each iteration I think.

👍 ↩ 🚩 upvoted 7 times

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⊟ 👤 **kamparia** `Most Recent ⊙` 3 weeks, 4 days ago

`Selected Answer: B`

I chose B because the model need to learn

👍 ↩ 🚩 upvoted 1 times

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⊟ 👤 **bludw** 3 months, 3 weeks ago

`Selected Answer: A`

I would choose A. And it is only because the features already have time-series information (like demand). And it would be way easier to train XGBoost than RNN model.

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⊟ 👤 **PhilipKoku** 4 months, 2 weeks ago

`Selected Answer: C`

C) The best choice for this scenario would be C. Recurrent Neural Networks (RNN).

Rationale:

The task at hand is a time-series prediction problem, where the goal is to predict future inventory levels based on historical data. RNNs are particularly well-suited for such tasks because they have "memory" and can learn patterns in sequential data1.
Features like region, location, historical demand, and seasonal popularity can be used as input to the RNN. The network can then learn the temporal dependencies between these features and the inventory levels.
RNNs can be trained incrementally, which means the model can be updated daily with new inventory data, allowing the model to adapt to changing trends and patterns

👍 ↩ 🚩 upvoted 1 times

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⊟ 👤 **vale_76_na_xxx** 10 months ago

go for C
https://www.akkio.com/post/deep-learning-vs-reinforcement-learning-key-differences-and-use-cases#:~:text=Reinforcement%20learning%20is%20particularly%20well,of%20reinforcement%20learning%20in%20action.

👍 ↩ 🚩 upvoted 1 times

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⊟ 👤 **Sum_Sum** 11 months, 1 week ago

`Selected Answer: C`

The question asks for "prediction model"
classification and RL do not fit the bill
CNN are used for vision
so only answer left is C

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⊟ 👤 **12112** 1 year, 3 months ago

`Selected Answer: C`

I'm not sure that daily basis means it is time series. It could mean updating the model daily.
But I'll follow collective intelligence.

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⊟ 👤 **M25** 1 year, 5 months ago

`Selected Answer: C`

Went with C

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⊟ 👤 **enghabeth** 1 year, 8 months ago

`Selected Answer: B`

Reinforcement Learning(RL) is a type of machine learning technique that enables an agent to learn in an interactive environment by trial and error using feedback from its own actions and experiences.

👍 ↩ 🚩 upvoted 1 times

**wish0035** 1 year, 10 months ago

Selected Answer: C

ans: C

👍 ↩ 🏳 upvoted 1 times

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**EFIGO** 1 year, 11 months ago

Selected Answer: C

RNN are a fit tool to work with time-series as this one, so C

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**GCP72** 2 years, 2 months ago

Selected Answer: C

Correct answer is "C"

👍 ↩ 🏳 upvoted 2 times

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**Mohamed_Mossad** 2 years, 4 months ago

Selected Answer: C

"algorithm to learn from new inventory data on a daily basis" = time series model , best option to deal with time series is forsure RNN , vote for C

👍 ↩ 🏳 upvoted 1 times

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**morgan62** 2 years, 6 months ago

Selected Answer: C

It's C.

👍 ↩ 🏳 upvoted 3 times

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**A4M** 2 years, 8 months ago

C - for time series

👍 ↩ 🏳 upvoted 2 times

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**alphard** 2 years, 10 months ago

My option is B.

"You want the algorithm to learn from new inventory data on a daily basis". The implication is a feedback with reward or punishment, which can optimise the mode. But, all other options can only practice prediction against new data rather than learning knowledge from new data automatically.

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