"Scheduling Machine Learning Models" Module Transcript

Chapter 1

Intro, Topics Covered, & Learning Outcomes

Hey. My name is Hayley, and I'm on the One AI team here at One Model. In previous modules, you learned how to create and refine machine learning models. In this module, we'll take it a step further and show you how to maintain those models by scheduling them for regular runs, ensuring timely results, consistent performance, and a good model fit over time.

During this module, we will cover some benefits of scheduling machine learning models and step-by-step instructions of how to schedule models in One AI.

After watching this module, you will understand the importance of scheduling models for timely insights and consistent performance. You will know the step by step process for scheduling models. You will gain confidence in managing and adjusting scheduled runs as needed. And you will recognize the importance in always validating scheduled model results.

Chapter 2

Benefits of Scheduling Models

Section 2 - Benefits of Scheduling Models

Before we dive into the how to, let's talk about why scheduling these processes is beneficial.

First and foremost, timeliness. Depending on model parameters and input data, large machine learning models can take hours to run, So scheduling them to run regularly, let's say overnight, allows you to have fresh results ready to review on a specified cadence so you are never left waiting for results.

It also takes the burden off remembering to rerun the models regularly off the user and puts this responsibility back on One AI. You can schedule these models to run at specific intervals that align with your business needs so you have the necessary data when you need to make informed decisions.

Additionally, scheduled models lend themselves to better consistency. Regularly scheduled model runs ensure that your models are consistently updated with the latest data and are making predictions based on the most recent information available. This consistency helps maintain the model's relevance and accuracy over time.

And finally, regularly running machine learning models also checks that the model is not overfit or underfit to your organization's data. We want to make sure models are well fit, meaning it strikes an appropriate balance between capture and capture and capture.

We want to make sure models are well fit, meaning it strikes an appropriate balance between capturing the underlying patterns in the data without being overly complex or simplistic so it can generalize effectively to new unseen data. Basically, we want to make sure that as time passes and the input data evolves, the model is still producing accurate results and didn't learn the wrong patterns from very specific training data. If the model is under or overfit, you will have the opportunity to fix it sooner rather than later.

Chapter 3

Scheduling Models in One AI

Section 3 - How to Schedule Models in One AI

Before I demonstrate in One Model, I wanted to quickly mention that the model must run successfully before it can be scheduled in One AI. If a model has run successfully, it will be in a pending or deployed status. If the last model run was unsuccessful, it will be in an aired, canceled, or ignored status, and you will not be able to schedule it until a successful run has fully completed. You will see this error message above the scheduler if that is the case.

Now let's head over to One Model and I will walk you through scheduling a model in One AI.

To get started, navigate to One AI machine learning by clicking One AI in the main ribbon menu. Then scroll to the model that you wish to schedule and click the 'Schedule' button next to the 'Edit' button here. Click the 'Enabled' checkbox to unlock the scheduling section.

Next, choose the time period you want to schedule the model to run on with the run every dropdown menu. Your choices are day, week, or month. Monthly is the most

common choice for many popular One AI recipe models, but you can customize based on your organizational needs.

Next, if you selected 'Week' or 'Month' for the time period level, you must pick the days or dates you want the model to run on. You must select at least one, but can select multiple if desired. If using weekly, there is no default day, so you will need to select your preferred day. If using monthly, it defaults to the 31st, which not all months have. I recommend switching the date to the 1st or another date that meets your needs, but also exists in all months.

Next, you have the option to set the time you would like to schedule the model to run at. This defaults to 00:00 hours UTC, but you can change the hour and minute with the 'At time' dropdowns, and you can change the time zone with the 'Time Zone' dropdown if you want to. Most users find that running models overnight is the most helpful so that they have fresh model results in the morning.

Finally, once you're happy with your schedule configuration, click the 'Save' button.

If scheduling was configured correctly, you will see information populate under 'Next Scheduled Run', which states the date and time of the next scheduled run and how many days there are until the scheduled date. Keep in mind that this process schedules your models to run on a specific cadence, but the models will not auto deploy. This is because the task of deploying machine learning model results requires human intervention since performance of models can change drastically over time. Once you have reviewed the EDA and Results Summary reports, you can manually deploy the model results if they meet your performance and fit requirements.

Chapter 4

Conclusion & Thanks

You've learned how scheduling machine learning models in One AI can ensure timeliness, consistency, and optimal model fit. By understanding the steps and configuring schedules that align with your business needs, you can ensure your models stay relevant and accurate over time. Remember, reviewing your model results before deploying is essential to maintain high performance. Thanks for watching, and happy modeling!