# Section 3

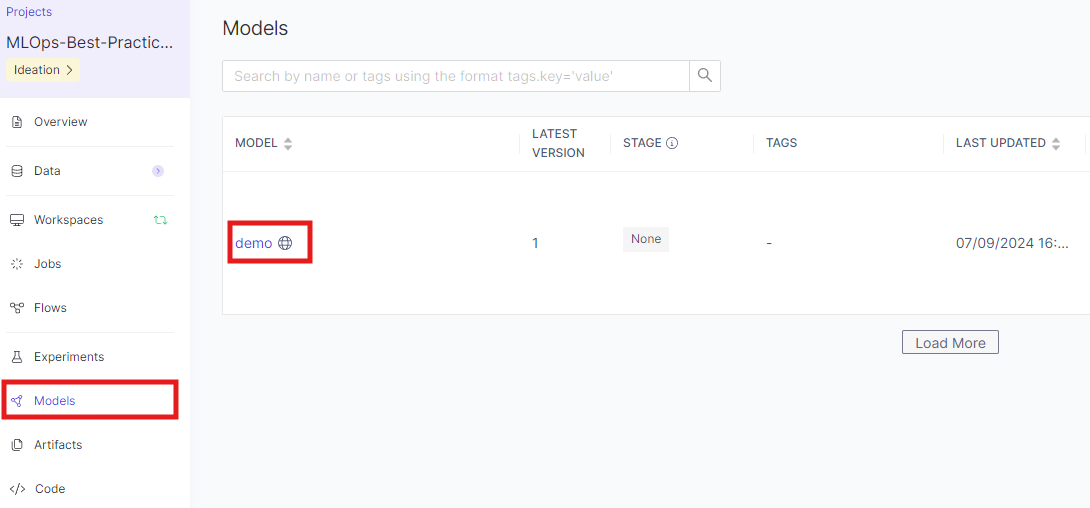
## Deploy Model

### Lab 3.1 Deploying Model API Endpoint

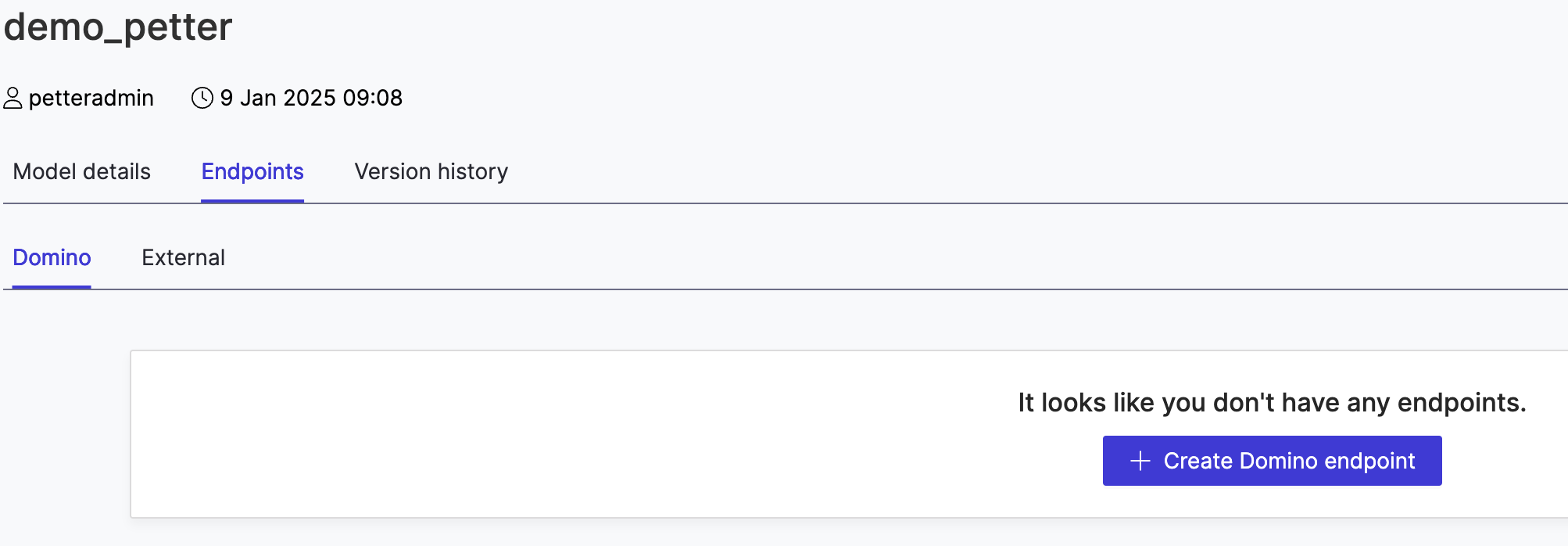
Now that you have completed model training and selection, it's time to deploy your model.

We trained a sklearn model in the last lab and saved it in our model registry. To deploy this trained model, we can go through the model registry and use our endpoint wizard to produce it.

Click on the **Models** Pane and then your model. Mine is called **Demo**. Your name is most likely different.

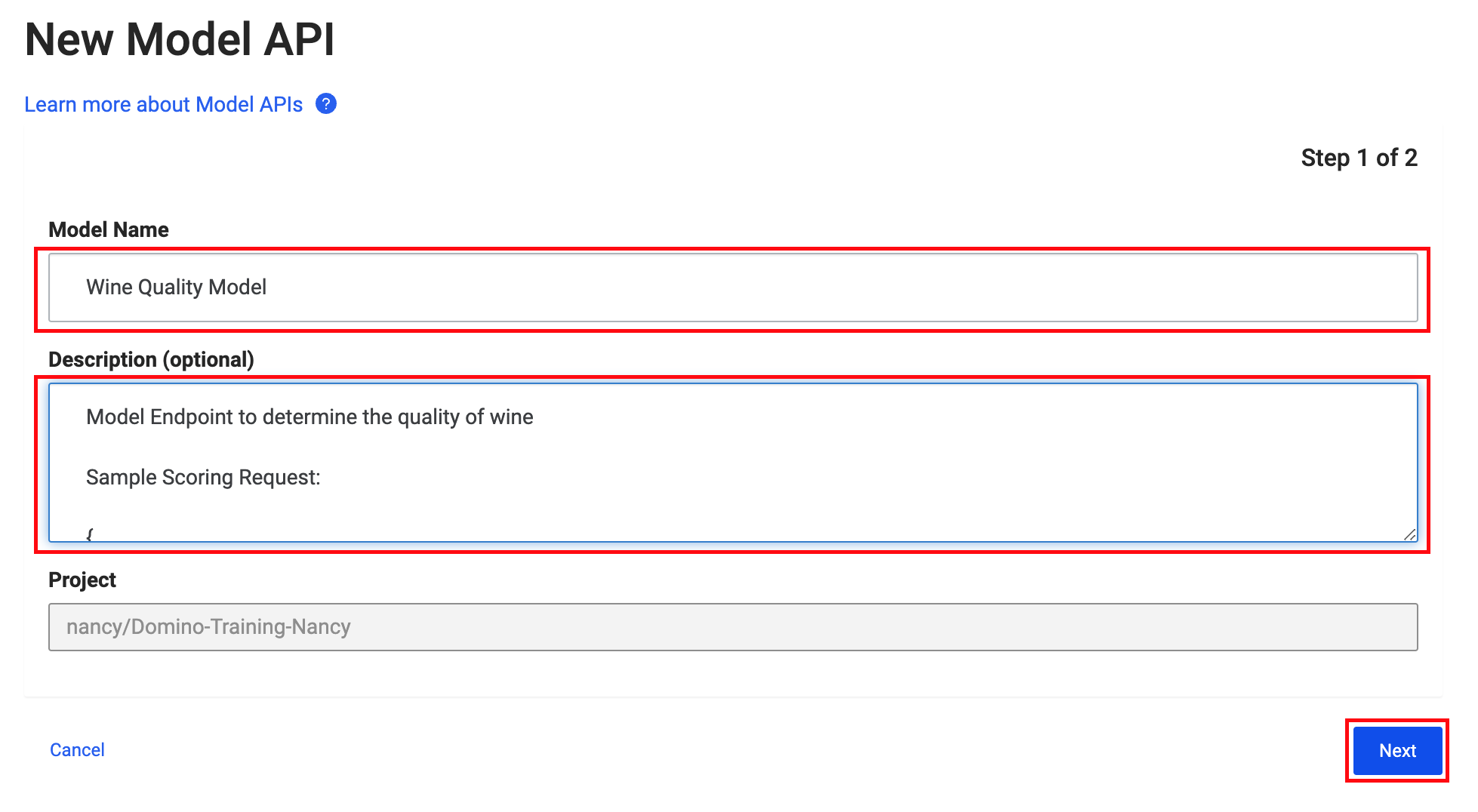


Click on **Create** in the **ENDPOINTS** section.

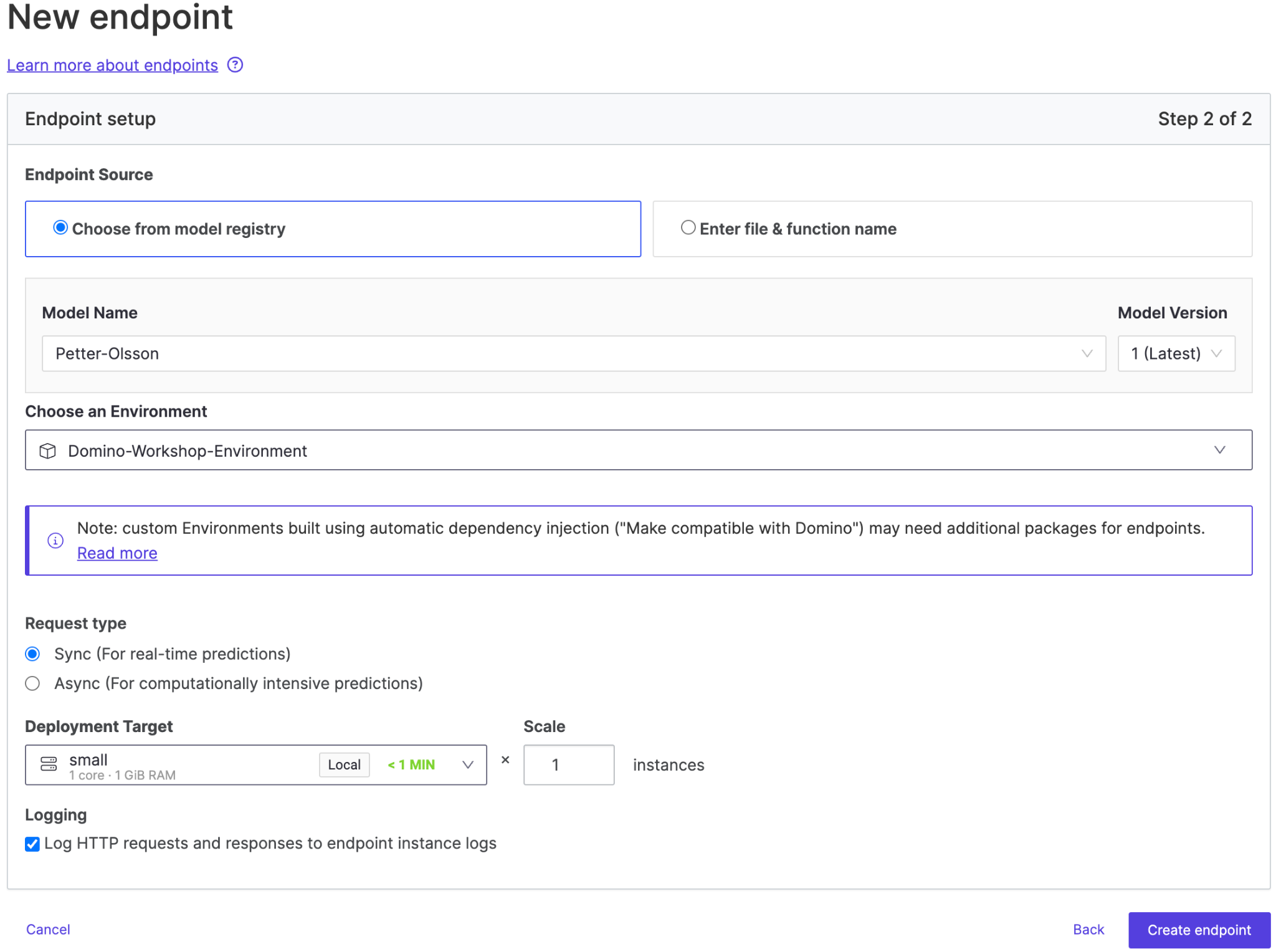


Give your model a name, and copy and paste the following in the Description.

| Model Endpoint  Sample Scoring Request:  {  "data": {  "density":0.99,  "volatile\_acidity": 0.028,  "chlorides": 0.05,  "is\_red" :0,  "alcohol": 11.1  }  } |
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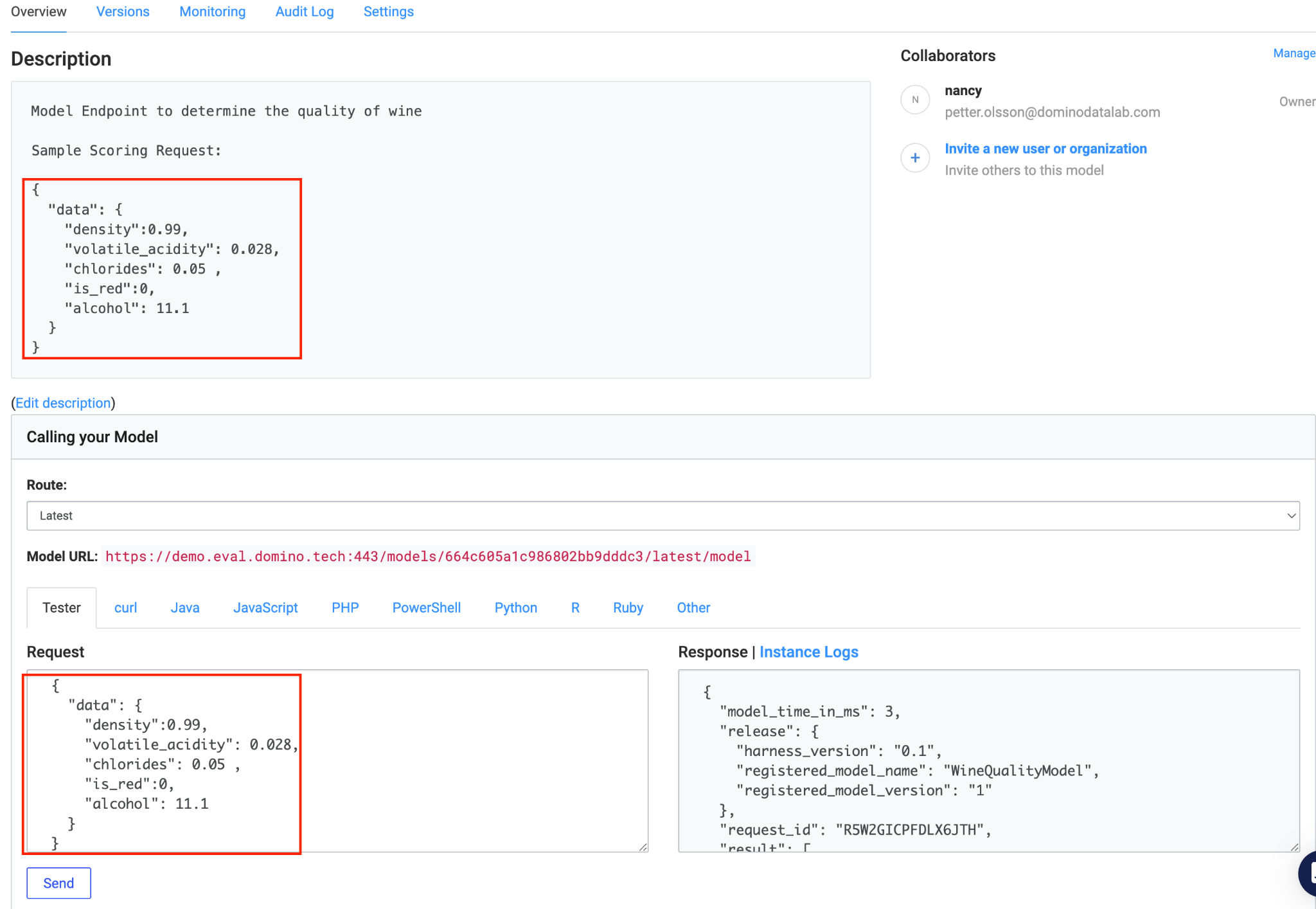
Select **Choose from model registry** under **Endpoint Source**, from **Model Name**, and finally check the box for logging and click **Create Endpoint.**

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Deploying the Endpoint will take a few minutes.

Once your model reaches the running state, a pod containing your model object and inference code will be up and ready to accept REST API calls.

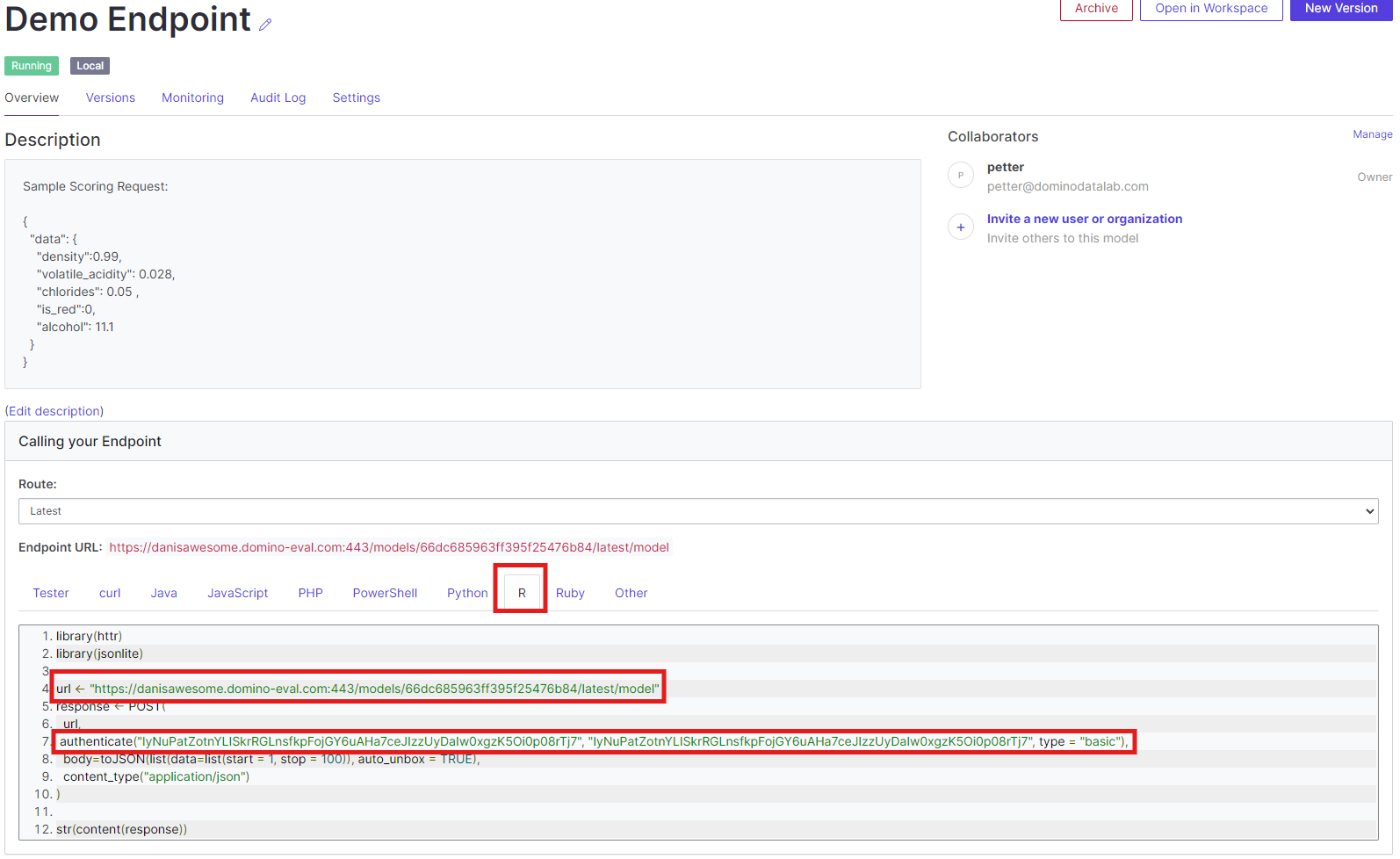
To test your model, navigate to the Overview tab. In the request field in the Tester tab, enter a scoring request in JSON form. You can copy the sample request that you defined in your description field.



In the response box, you will see a prediction value representing your model's predicted quality for a bottle of wine with the attributes defined in the Request box. Try changing 'is\_red' from 0 to 1 and 'alcohol' from 11 to 5.1 to see how the predicted quality differs. Feel free to play around with different values in the Request box.

For the next section, we need to collect three values. Open the **R tab** and copy the following values. I’ve added examples here, which you should **not** use. Save these values in a notepad on your local computer.

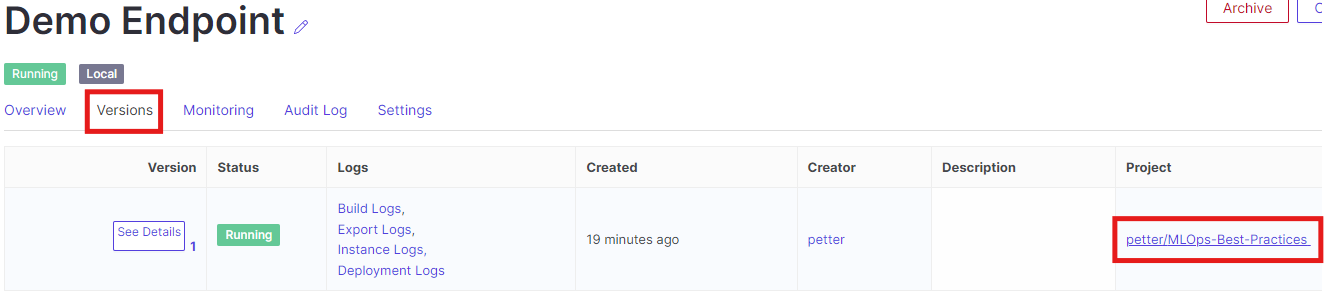
* **Url**
  + https://acme.domino-eval.com:443/models/66dc685963ff395f25476b84/latest/model
* **Authenticate**
  + IyNuPatZotnYLISkrRGLnsfkpFojGY6uAHa7ceJIzzUyDaIw0xgzK5Oi0p08rTj7
  + IyNuPatZotnYLISkrRGLnsfkpFojGY6uAHa7ceJIzzUyDaIw0xgzK5Oi0p08rTj7



In the next lab, we will deploy an R Shiny app that exposes a front end for collecting model input, passing that input to the model, and then parsing the model's response to a dashboard for consumption.

### Lab 3.2 Deploying Web App

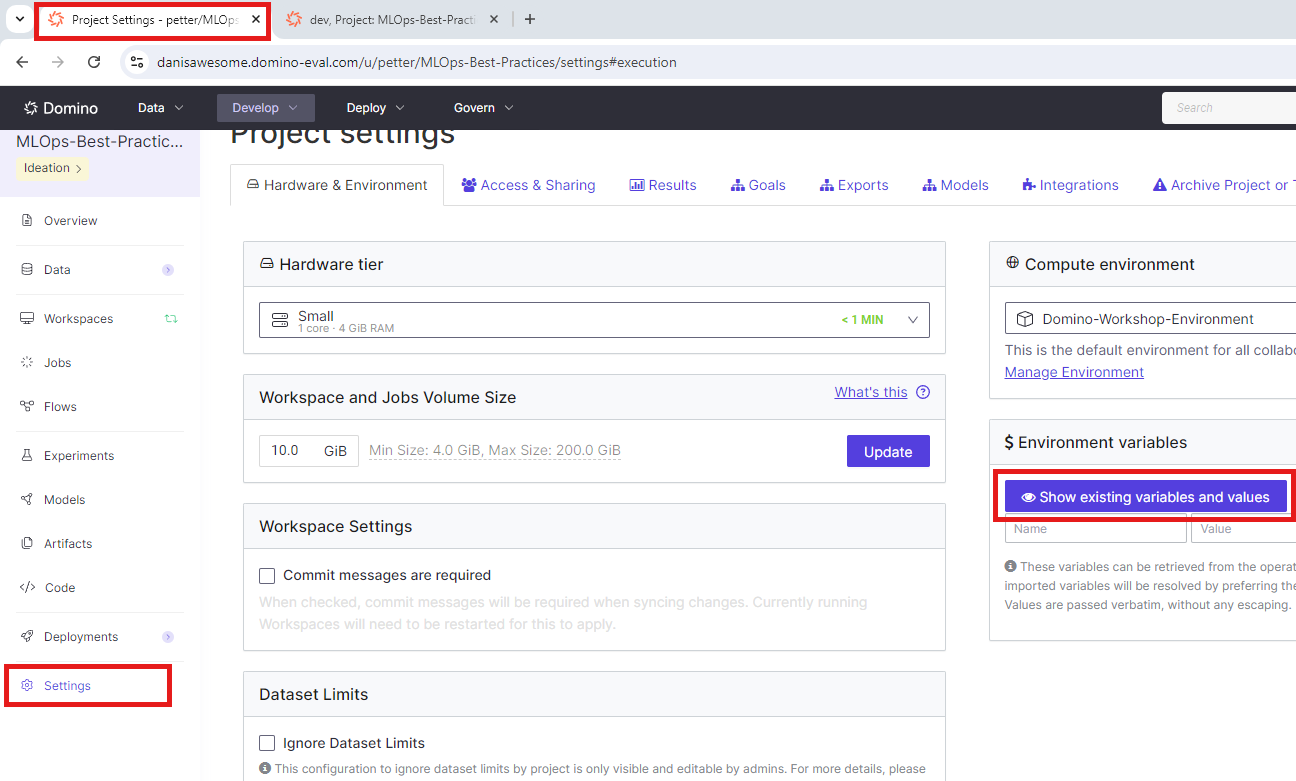
Now that we have a pod running to serve new model requests, we will build a front end to make calling our model easier for end-users.

Assuming you are still on your **Endpoint** page, click **Versions** and then the link back to your Project.

Click **Workspaces** and **Open** your running Workspace. In your code directory, you will have an **app.sh** file. Domino runs this Bash script after initializing the host to serve your App. Review this file; no changes are needed.

Open **apps/wine.R**. Review this file. No changes are needed.

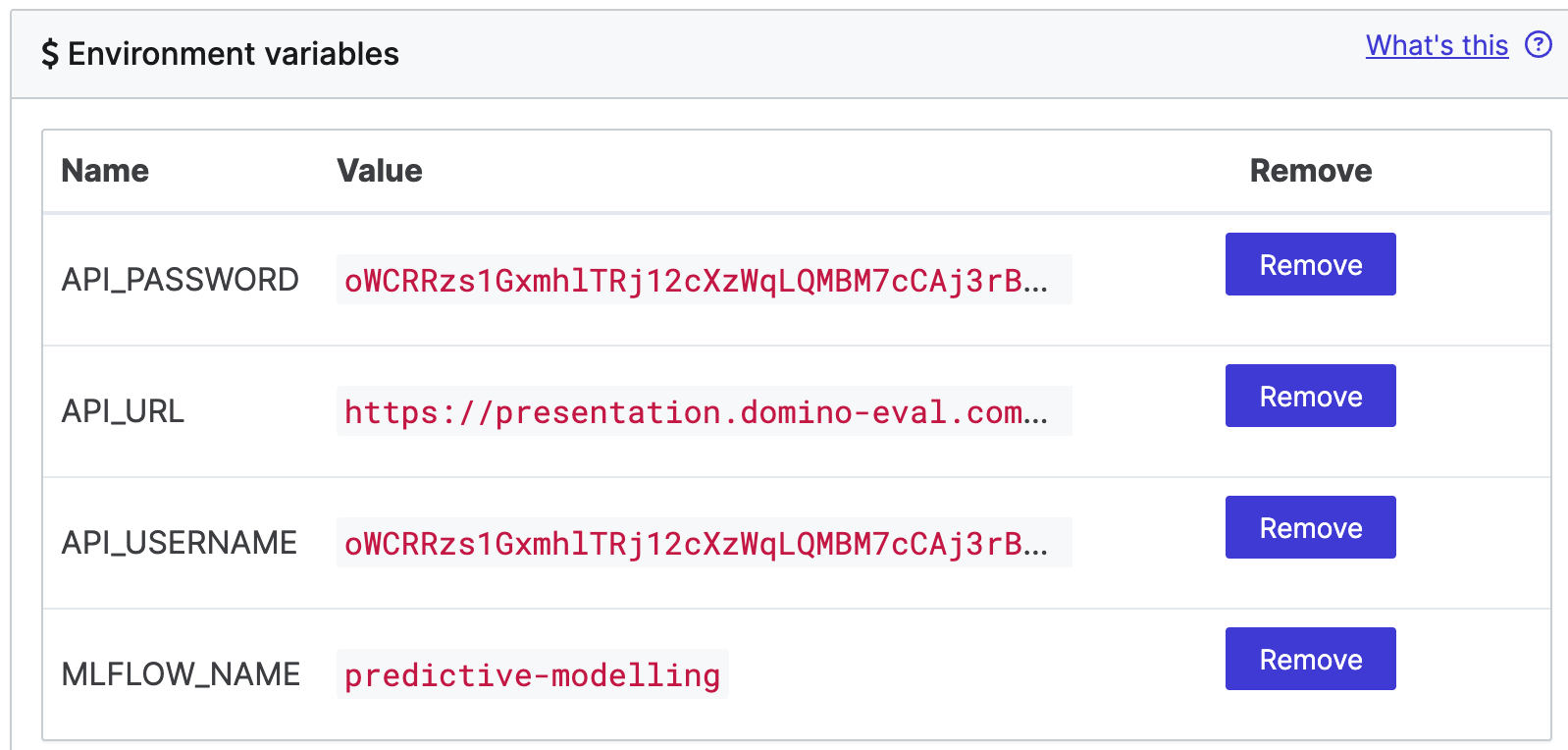
Return to your previous Tab, click **Settings,** and then **Show existing variables and values**.



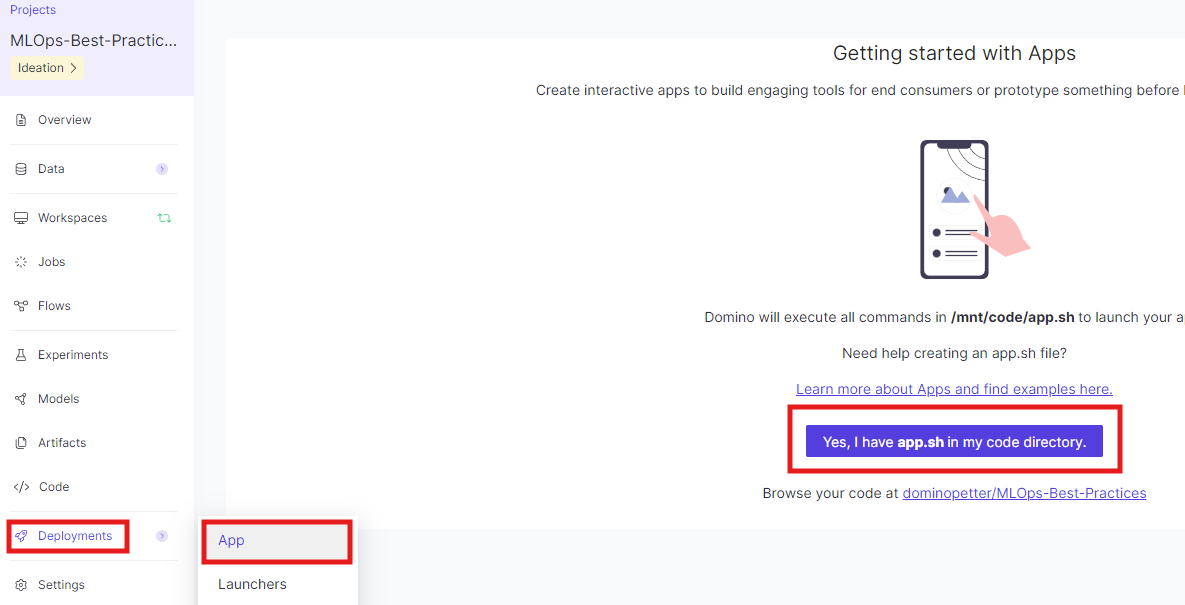
Add the following values to the variables from above.

| API\_URL : https://acme.domino-eval.com:443/models/66dc685963ff395f25476b84/latest/model  API\_USERNAME : IyNuPatZotnYLISkrRGLnsfkpFojGY6uAHa7ceJIzzUyDaIw0xgzK5Oi0p08rTj7  API\_PASSWORD : IyNuPatZotnYLISkrRGLnsfkpFojGY6uAHa7ceJIzzUyDaIw0xgzK5Oi0p08rTj7 |
| --- |

It should look something like this:



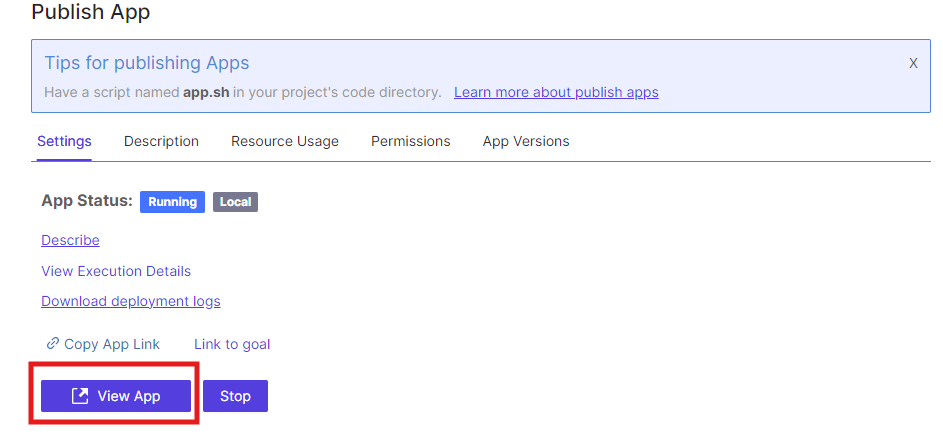
Navigate to **Deployments** -> **App** pane in your project and click the “**Yes, I have app.sh in my code directory.**”



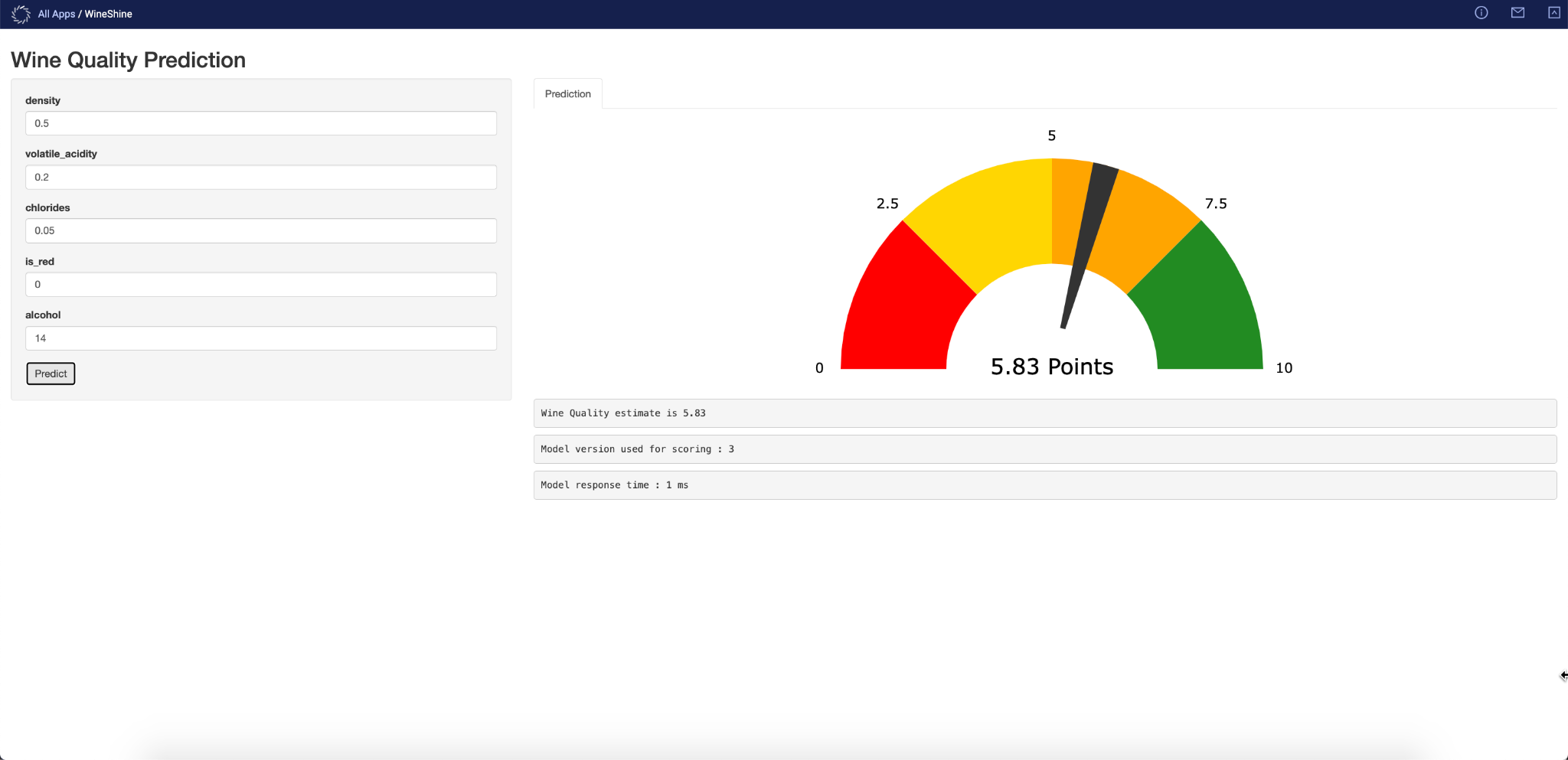
Enter a **Title** for your app and click **Publish.**

Click Publish.

Click the **View App** button once your app is active (within ~1-3 minutes).



Once you're in the app, you can use the form on the right side of your page to send different scoring requests to your model. Click Predict to send a scoring request and view the results in the visualization on the left side.



End Section 3