NAVSUP Training Session

The AI Squared Team – 03/27/2024

Introduction

Welcome to the AI Squared training document for the NAVSUP training session taking place on 03/27/2024! We are excited to be providing this training session, and hope this document helps provide the user with some guidance along the way.

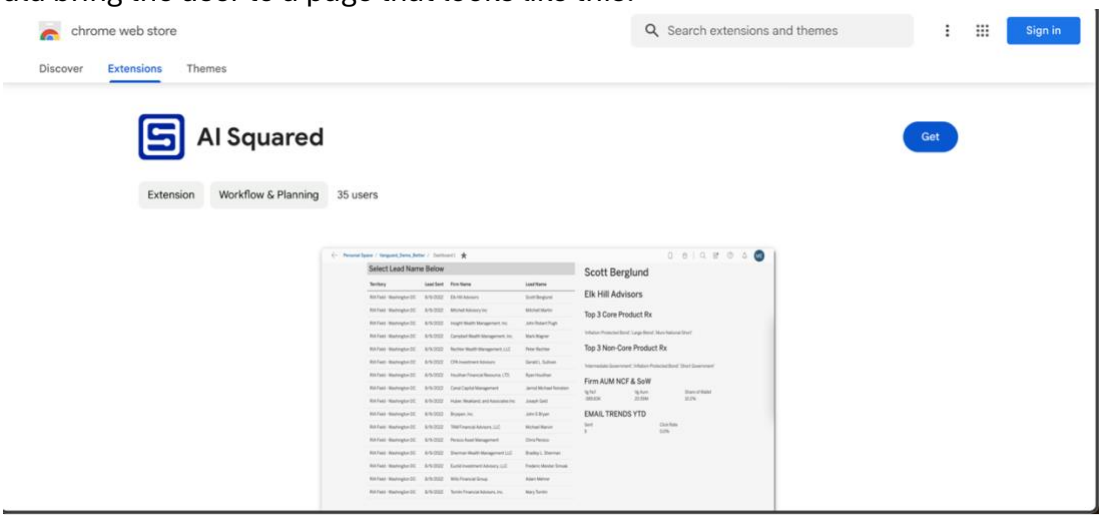
Before we begin, let's outline what we will be doing during this workshop:

1. Downloading and installing the AI Squared Browser Extension in either Google Chrome or Microsoft Edge.
2. Connecting to the AI Squared platform via the AI Squared Browser Extension.
3. Running the existing model cards in the AI Squared Platform
4. Building a model card – Supply Chain LLM
5. Building a model card – Reverse ETL for SOS Dashboard
6. Building a model card – Text Summarizer using a deployed open source LLM

Browser Extension Setup

Let's go ahead and get the browser extension downloaded and installed. First, in either Google Chrome or Microsoft Edge, please go to the following link: AI Squared (google.com)

It should bring the user to a page that looks like this:



Go ahead and click the "Get" button and follow any prompts to install the extension. Once installed, it's recommended to pin the extension for easy access.

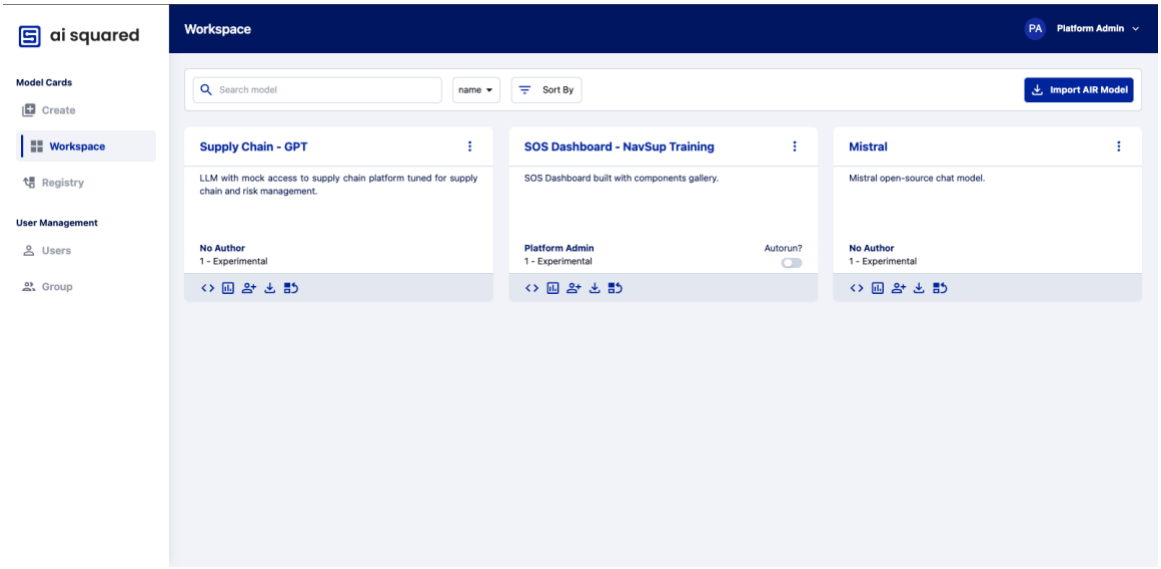
Now that the extension is installed, it's time to log into platform using the extension. Go ahead and click on the extension icon at the top of the browser page, and then in the URL field enter the URL https://training.squared.ai. Once the extension connects to the platform, the user can click the "Continue" button, then "Log in", and provide the

credentials we will or already have given the user. Once the user has successfully logged in, the user will be able to reference the AI Squared workspace directly on the webpage. This will allow the model results to be injected into the Document Object Model (DOM) of the HTML page of the downstream web application.

By clicking on the pinned extension button on the toolbar, the user can call model cards from the workspace or registry, add new models and configure other settings. This will be most useful when the user would like to test models before they are set to auto-run in production.

Workspace Overview

Now that the user has successfully logged into the AI Squared Extension and Platform, let's start running some of the model cards in the platform!



After the user has installed and set up the extension, we will shift focus towards the workspace management window. This is a specific workspace configured for each client environment. The user can access the AI Squared platform here: training.squared.ai

The initial window in the AI Squared Platform is known as the 'Workspace'. From here the user can view all their published model cards, inquire about specific model results and feedback, create new models from scratch or clones and more.

These models cards offer a great deal of configurability and customization. The platform provides a no-code and a low-code approach to creating, publishing and updating each specific model card. The user has the option to create the model via the AI Squared interface on the platform itself, or to create the model behind the scenes and upload a

compatible .air file directly onto the platform. This can be done by connecting to the AI Squared Python API (high-code compatibility). See python documentation here.

Creating Model Cards

The following steps will be broken up into their configuration step assignment in the platform. The user will be able to follow this guide as a compliment to the training to create the three model cards. The first card is the Supply Chain LLM, the second card is the SOS Dashboard and the third card is the open-source Mistral model. We will ultimately launch all of the model cards using the extension that has already been installed.

To start, the user should go to training.squared.ai and login if not done already. Toggle over to the workspace pane to see the three pre-built model cards. From here the user can look into each of the specific steps for the necessary configuration. When creating a new model card from scratch simply click in the 'Create' tab on the left-hand pane. Shall we begin?

What is a Model Card?

A model card represents a unique workflow that can be configured to accomplish a variety of tasks. Model cards can be used to run typical ETL jobs, data transformations, machine learning pipelines, end-to-end inference pipelines and more. The standard model card at AI Squared is comprised of 6 configuration steps: Harvesting, Analytic, Preprocessing, Postprocessing, Rendering and Feedback. All of these configuration steps serve a distinct purpose in the workflow generation and each of the steps can be completely customized to fit the specific requirements of your organizational workflow.

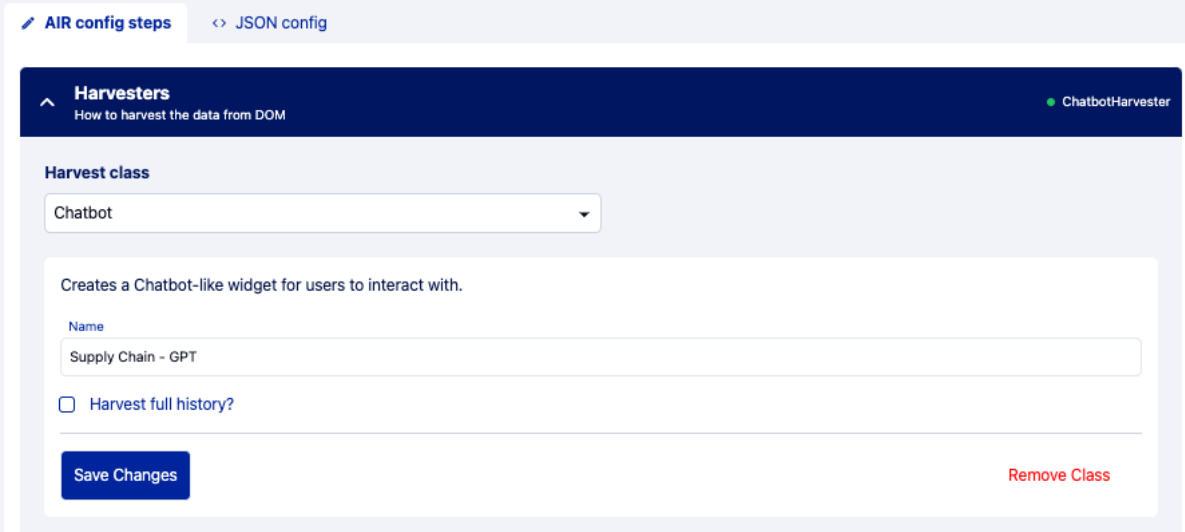
Use Case 1 | Supply Chain - GPT

Harvester:

The harvester step is the first step in the model creation process and will determine the method in which the data is extracted from the Document Object Model (DOM) or end-user input. In this case, we will be using a chatbot harvester.

Steps:

- Click into the harvester step and select Chatbot class
- Name the model anything you would like; this will appear at the top of the chatbot widget.
- **Save Changes**

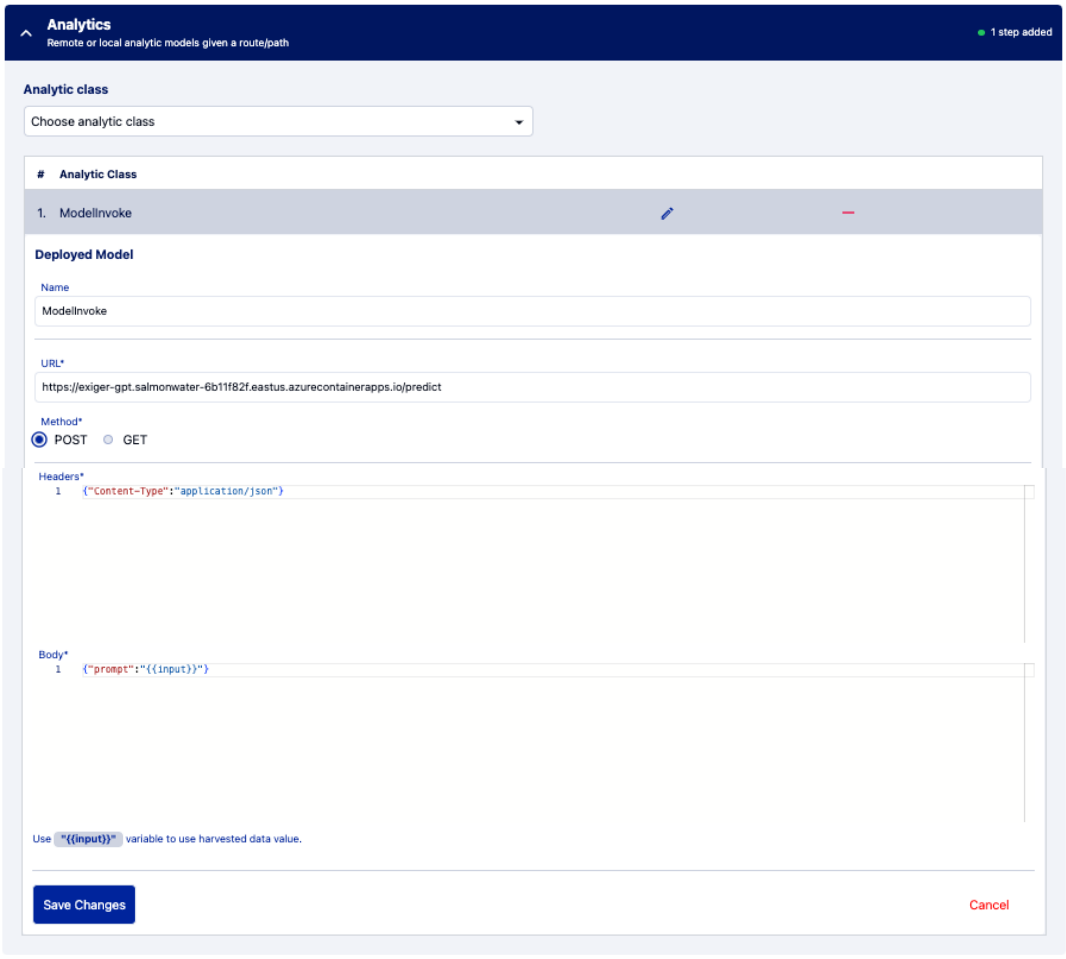


Analytic:

The analytics menu allows the user to add custom analytic steps relative to their specific workflow needs. The process involves selecting and configuring the type of analytic operation that will be applied to the data. This step is crucial for defining how the platform connects to the data source or endpoint and how the data is processed, analyzed and modeled within the platform.

Steps:

- Select 'Deployed Analytic' from the menu dropdown. *Feel free to ask about all of the available connectors*
- Populate the URL with our deployed model endpoint:
  https://exiger-gpt.salmonwater-6b11f82f.eastus.azurecontainerapps.io/predict
  http://aisquared-2xa100.eastus.cloudapp.azure.com:2244/predict
- Define the Method as 'POST'
- Populate the Header* as needed:
  - {"Content-Type":"application/json"}
- Populate the Body* as needed:
  - {"prompt":"{{input}}"}
- **Save Changes**



Preprocessing:

The preprocessing menu dropdown gives the user the ability to specific processing steps to the harvested data fields. This will allow for proper setup before the targeted data is used to retrieve model results

Steps:

- No changes necessary

Postprocessing:

The postprocessing step in the AI Squared platform involves applying specific transformations to the output of models, tailoring the results to be more interpretable or suitable for further use.

Steps:

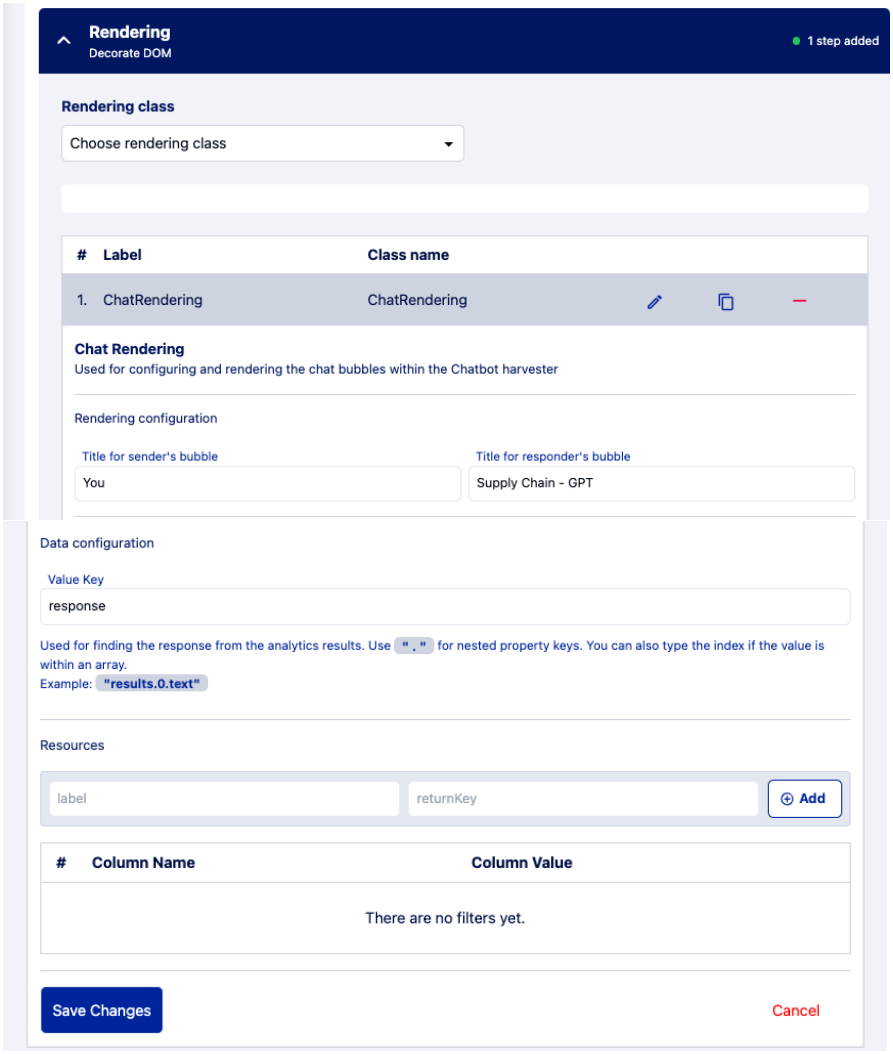
- No changes necessary

Rendering:

The rendering functionality allows the user to fully customize how the model results are displayed on the end-user application. The model results are typically stored in a container that is injected into an element within the DOM. Each rendering option has a unique degree

of customization available, and the custom rendering option allows the user to bring fully executable code for any specific web development components necessary.
Steps:

- Select ‘Chat Rendering’ from the dropdown menu.
- Change the Label if needed.
- Provide a name for the user in the ‘Title for sender's bubble’ window. Default: ‘You’
- Provide a name for the model in the ‘Title for responder’s bubble’ window. Default: ‘Supply Chain – GPT’
- Write ‘ response’ in the Value Key pane.
- **Save Changes**

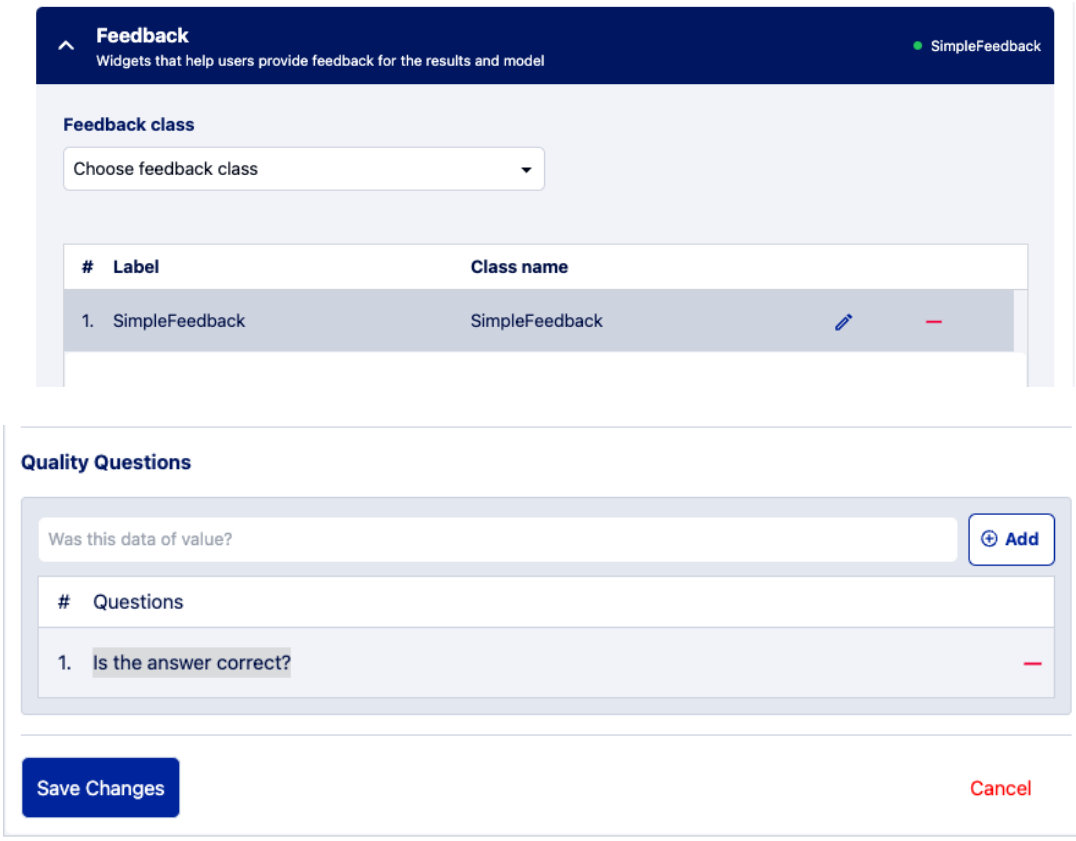


Feedback:

The feedback step in the AI Squared platform is designed to gather end-user responses and opinions about the model's predictions, which is crucial for model evaluation and improvement. The feedback widgets appear in the bottom right hand of the target webpage and can be configured to display how the user would like. The feedback is generally

collected from end-users and sent directly back to the platform where it can be inferred on by pipeline managers, product managers, data scientists, etc.
Steps:

- Select 'SimpleFeedback' from the dropdown menu
- Ignore 'Bucket' and 'File Name'
- Set 'Prediction Name Key' to 'name'
- Set 'Prediction Value Key' to 'value'
- + Add 'Is the answer correct?' in the Quality Questions Pane.
- **Save Changes**



<u>Playing the Model:</u>
Now let's go to any webpage and launch the model from the extension. Select the AI Squared Extension and play the 'Supply Chain – GPT' Model. Once the chatbot widget pops up, here are some pre-configured prompts that we can use:

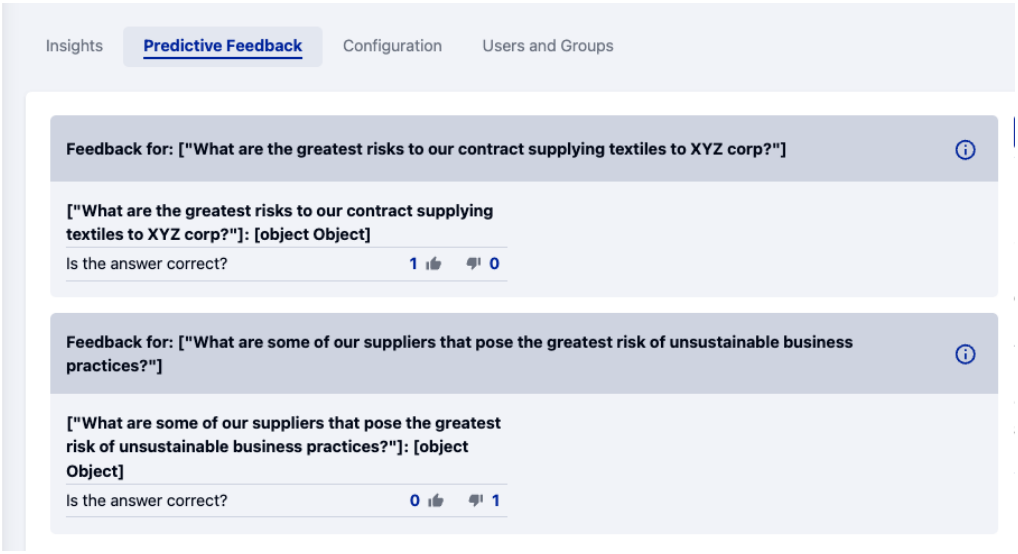
1. What are the greatest risks to our contract supplying textiles to XYZ corp?
2. What are some of our suppliers that pose the greatest risk of unsustainable business practices?
3. What is our risk posture across contracts if there are increased sanctions in China? What are some other providers for some of our contracts we could use?

4. InnovationCorp, which provides us with cotton from Egypt, was just found to be utilizing forced labor. We have to use a different supplier - what portion of our cotton supply comes from InnovationCorp, and what are the best alternative suppliers?

Using Feedback:

Once we are prompted with a response, provide some feedback to the model. After you have provided feedback, go back to the platform and select the small bar chart on the model card.

Users can use this pane to track usage. Toggle to the 'Predictive Feedback' pane to see the updated feedback responses.

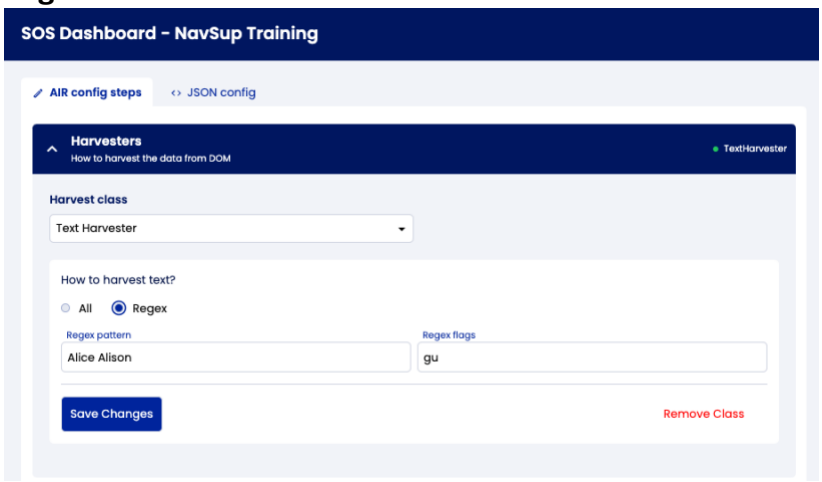


Use Case 2 | Predictive (SOS) Dashboard

The next model we are going to create is a simple dashboard used to deliver a batch of inferences as well as historical data to our end users. This model will scrape the end user web application for an ID/harvester then will communicate with a model repository and send the results back to the web application. The results will be rendered directly within the HTML webpage to allow the user to look at the specific inferences related to their workflow.

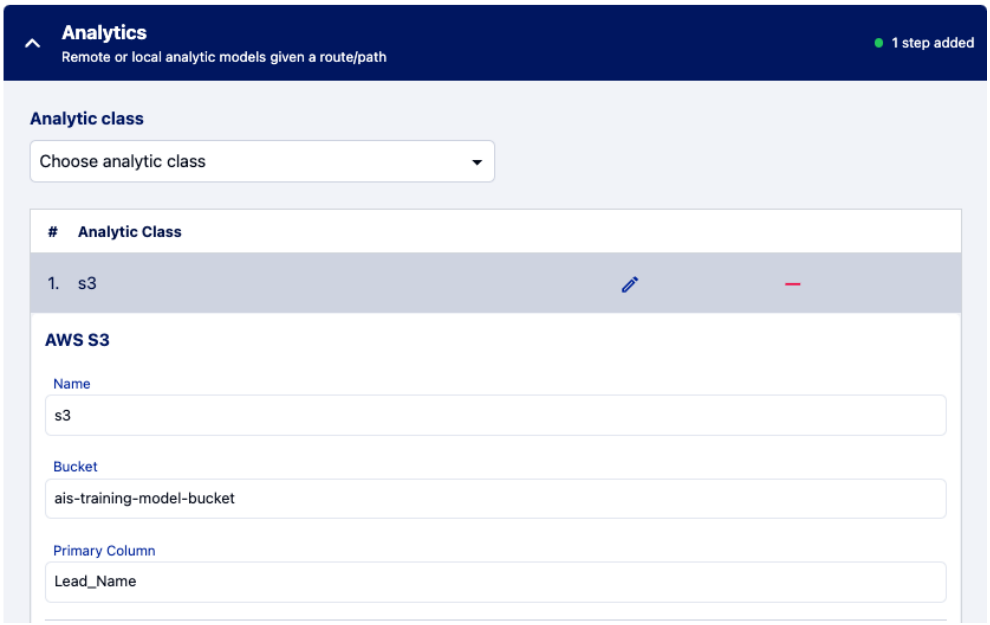
Harvester Steps:

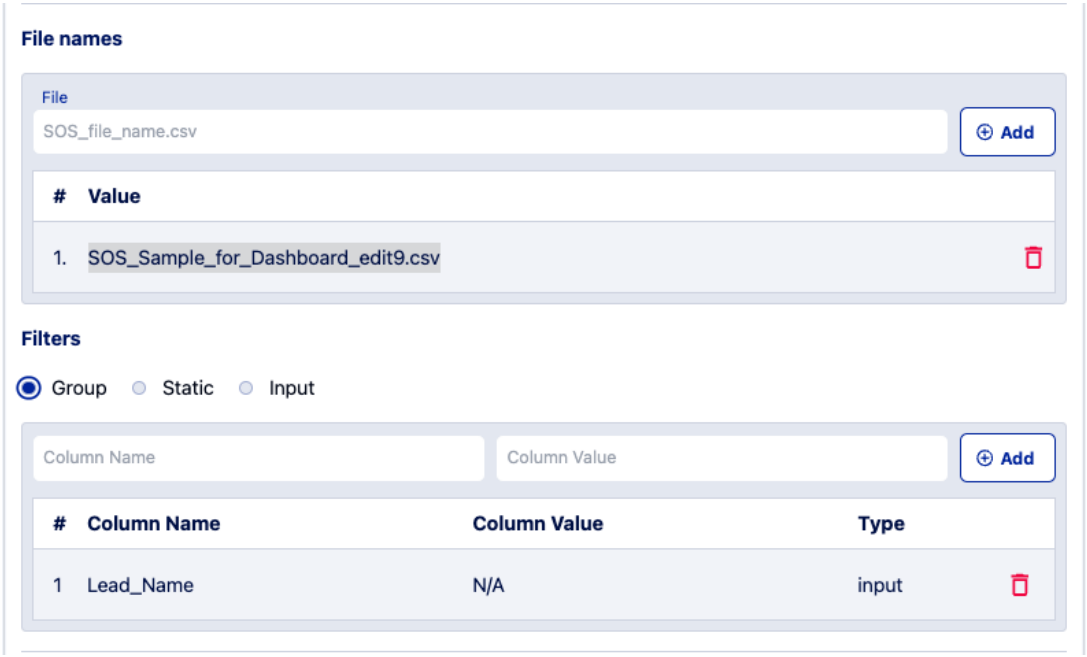
- Select 'Text Harvester' from the dropdown menu.
- Select 'Regex'
- Type 'Alice Alison' into the Regex Pattern pane. Text fields can be delimited by using a |.
- Type 'gu' into the Regex Flags pane
- **Save Changes**

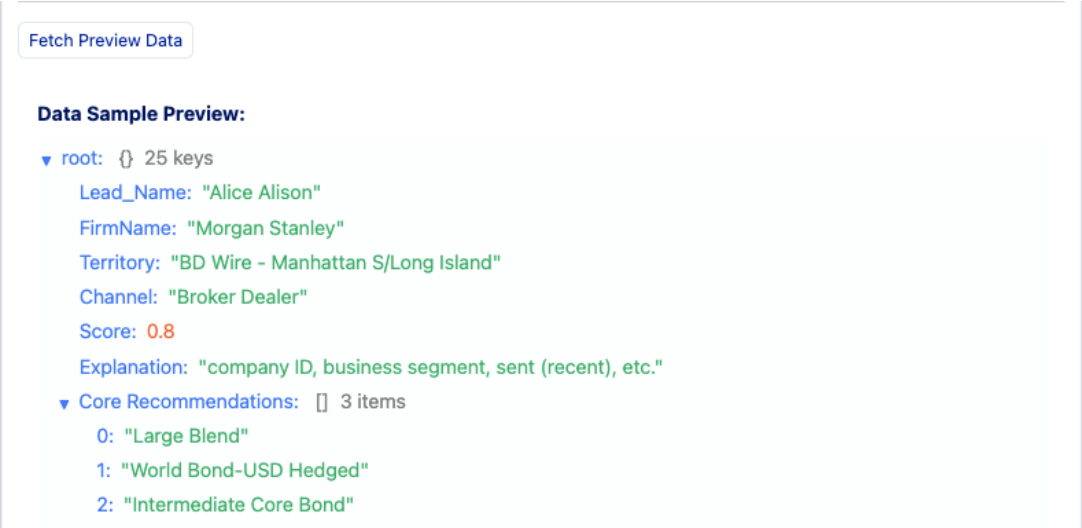


Analytic Steps:

- Select 'AWS s3' from the analytic class dropdown menu
- Provide a name for the class. 's3'
- Bucket Name: 'ais-training-model-bucket'
- Primary Column: 'Lead_Name'
- + Add 'SOS_Sample_for_Dashboard_edit9.csv' into the File names pane.
- Click 'Input' in the filter pane
- + Add 'Lead_Name' as the Column Name
- Fetch Data Preview to ensure valid connection.
- **Save Changes**


Analytics
Remote or local analytic models given a route/path
1 step added
Analytic class
Choose analytic class
Analytic Class
1. s3
AWS S3
Name
s3
Bucket
ais-training-model-bucket
Primary Column
Lead_Name


File names
File
SOS_file_name.csv
Add
Value
1. SOS_Sample_for_Dashboard_edit9.csv
Filters
Group
Static
Input
Column Name
Column Value
Add
Column Name Column Value Type
1 Lead_Name N/A input



Preprocessing Steps:
None

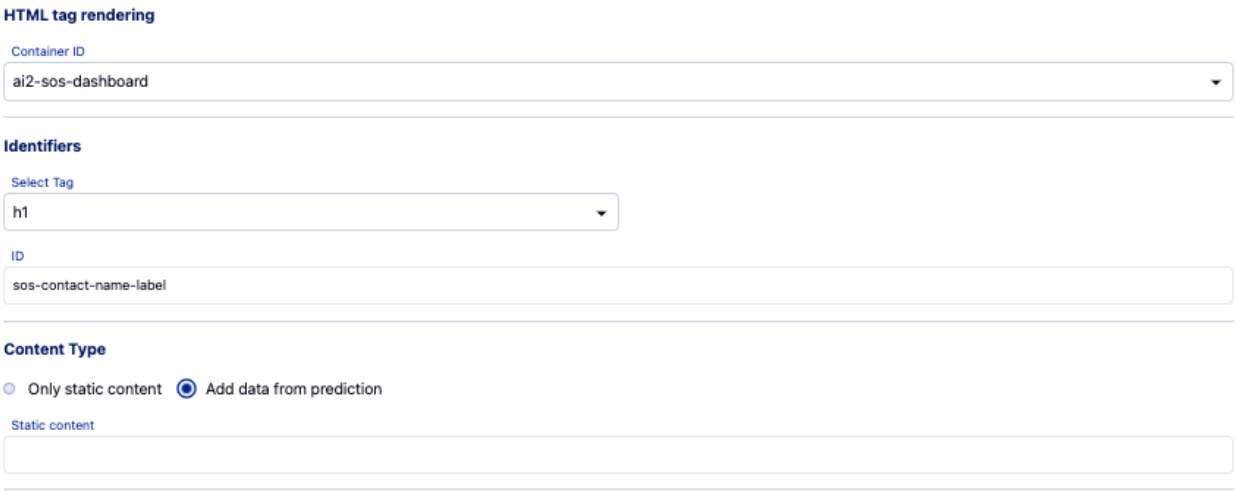
Postprocessing Steps:
None

Rendering Steps:
Dashboard Container:

- Select ‘Dashboard Container’ from the dropdown menu
- Select ‘Static’
- Select ‘After Content’
- Select ‘Vertical’
- Provide a name for the Container Id: ‘ai2-sos-dashboard’
- Type ‘body’ into the Query Selector Pane
- Type ‘auto’ into the Height and Width panes
- **Save Changes**

Lead Name Label

- Select HTMLTagRendering from dropdown
- Select the ‘ai2-sos-container’ from the dropdown
- Select tag ‘h1’
- ID: ‘sos-contact-name-label’
- Content Type: add data from prediction
- Static Content:
- Select tag: strong
- Column Key: name
- Column Value: Lead_Name
- Value Key: value
- **Save Changes**



Email Stats Container

- Select ‘Dashboard Container’ from the dropdown menu
- Select ‘Static’
- Select ‘After Content’
- Select ‘Horizontal’
- Provide a name for the Container Id: ‘email-stats-container’
- Type ‘#ai2-sos-dashboard’ into the Query Selector Pane
- Type ‘auto’ into the Height and Width panes
- **Save Changes**

Email Sent Label

- Select HTMLTagRendering from dropdown
- Select the ‘email-stats-container’ from the dropdown
- Select tag ‘div
- ID: ‘email-sent-label’
- Content Type: add data from prediction
- Static Content: Emails Sent YTD
- Select tag: p
- Column Key: name
- Column Value: Sent
- Value Key: value
- **Save Changes**

Email Opened Label

- Select HTMLTagRendering from dropdown
- Select the ‘email-stats-container’ from the dropdown
- Select tag ‘div
- ID: ‘email-open-label’
- Content Type: add data from prediction

- Static Content: Emails Opened
- Select tag: p
- Column Key: name
- Column Value: Clicked
- Value Key: value
- **Save Changes**

Email Bounced Label

- Select HTMLTagRendering from dropdown
- Select the ‘email-stats-container’ from the dropdown
- Select tag ‘div
- ID: ‘email-bounced-label’
- Content Type: add data from prediction
- Static Content: Emails Opened
- Select tag: p
- Column Key: name
- Column Value: Bounced
- Value Key: value
- **Save Changes**

Firm Market Table

- Select ‘TableRendering’ from the dropdown
- Container ID: ai2-sos-dashboard
- Table ID: lead-firm-data-table
- Table Name: Overview
- Column Key: name
- Value Key: value
- Table Data Columns: Select FirmName, AUM, NCF and Marketshare
- **Save Changes**

Engagement Trends Table

- Select ‘TableRendering’ from the dropdown
- Container ID: ai2-sos-dashboard
- Table ID: ai2-sos-engagement-table
- Table Name: Engagement Trends YTD
- Column Key: name
- Value Key: value
- Table Data Columns: Select Web Visits, Marketing Emails, Outbound Calls, Inbound Calls
- **Save Changes**

Bottom Half Container

- Select ‘Dashboard Container’ from the dropdown menu
- Select ‘Static’
- Select ‘After Content’
- Select ‘Horizontal’
- Provide a name for the Container Id: ‘ai2-sos-dashboard-bottom’
- Type ‘#ai2-sos-dashboard’ into the Query Selector Pane
- Type ‘auto’ into the Height and Width panes
- **Save Changes**

Bottom Left Container

- Select ‘Dashboard Container’ from the dropdown menu
- Select ‘Static’
- Select ‘After Content’
- Select ‘Horizontal’
- Provide a name for the Container Id: ‘ai2-sos-dashboard-bottom-left’
- Type ‘#ai2-sos-dashboard-bottom’into the Query Selector Pane
- Type ‘auto’ into the Height and Width panes
- **Save Changes**

Bottom Right Container

- Select ‘Dashboard Container’ from the dropdown menu
- Select ‘Static’
- Select ‘After Content’
- Select ‘Horizontal’
- Provide a name for the Container Id: ‘ai2-sos-dashboard-bottom-right’
- Type ‘#ai2-sos-dashboard-bottom’into the Query Selector Pane
- Type ‘auto’ into the Height and Width panes
- **Save Changes**

Core Recommendations Chart

- Select ‘DoughnutRendering’ from the dropdown menu
- Container Id: ‘ai2-sos-dashboard-bottom-left’
- Chart Id: ‘core-product-values-chart’
- Chart Name: Core Product Recommendations
- 300px for width and height
- Column Value: Core Product Recommendations
- **Save Changes**

Non-Core Recommendations Chart

- Select ‘DoughnutRendering’ from the dropdown menu
- Container Id: ‘ai2-sos-dashboard-bottom-left’

- Chart Id: ‘non-core-product-values-chart’
- Chart Name: Non-Core Product Recommendations
- 300px for width and height
- Column Value: Non-Core Product Recommendations
- **Save Changes**

Non-Core Recommendations Chart

- Select ‘DoughnutRendering’ from the dropdown menu
- Container Id: ‘ai2-sos-dashboard-bottom-right’
- Chart Id: ‘ai2-sos-score-chart’
- Chart Name: Sales Opp Score
- 300px for width and height
- Column Value: Score
- **Save Changes**

Non-Core Recommendations Chart

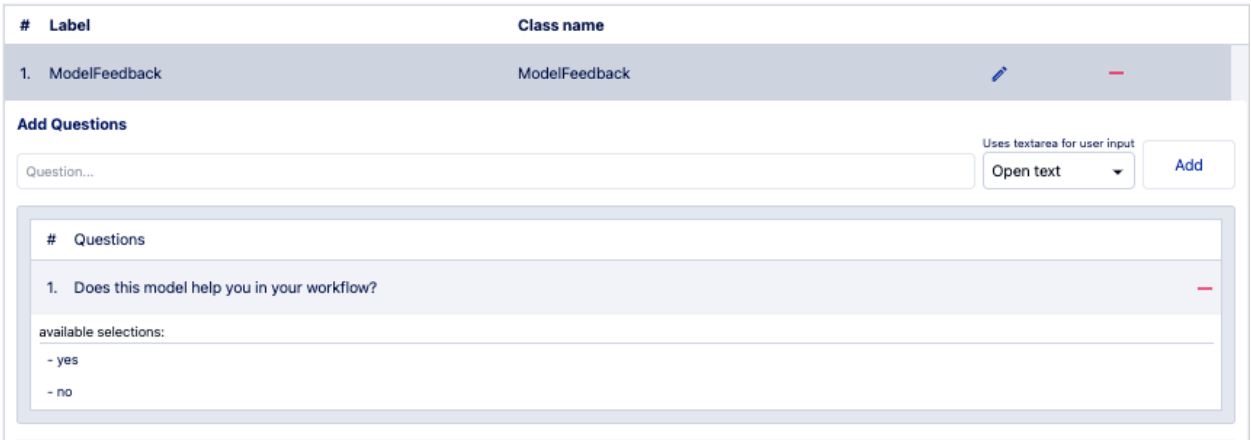
- Select ‘DoughnutRendering’ from the dropdown menu
- Container Id: ‘ai2-sos-dashboard-bottom-right’
- Chart Id: ‘ai2-sos-events-chart’
- Chart Name: Web and Events Signals
- 300px for width and height
- Column Value: Visits
- **Save Changes**

#	Label	Class name
1.	Dashboard Container	ContainerRendering
2.	Lead Name Label	HTMLTagRendering
3.	Email stats container	ContainerRendering
4.	Email Sent Label	HTMLTagRendering
5.	Emails Opened Label	HTMLTagRendering
6.	Emails Bounced Label	HTMLTagRendering
7.	Firm Market Table	TableRendering
8.	Engagement Trends Table	TableRendering
9.	Bottom Half	ContainerRendering
10.	Bottom Left Container	ContainerRendering
11.	Core Recommendations Chart	DoughnutChartRendering
12.	Non-Core Recommendations Chart	DoughnutChartRendering
13.	Bottom Right Container	ContainerRendering
14.	Sales Opp Chart	DoughnutChartRendering
15.	Events chart	DoughnutChartRendering

Feedback steps:

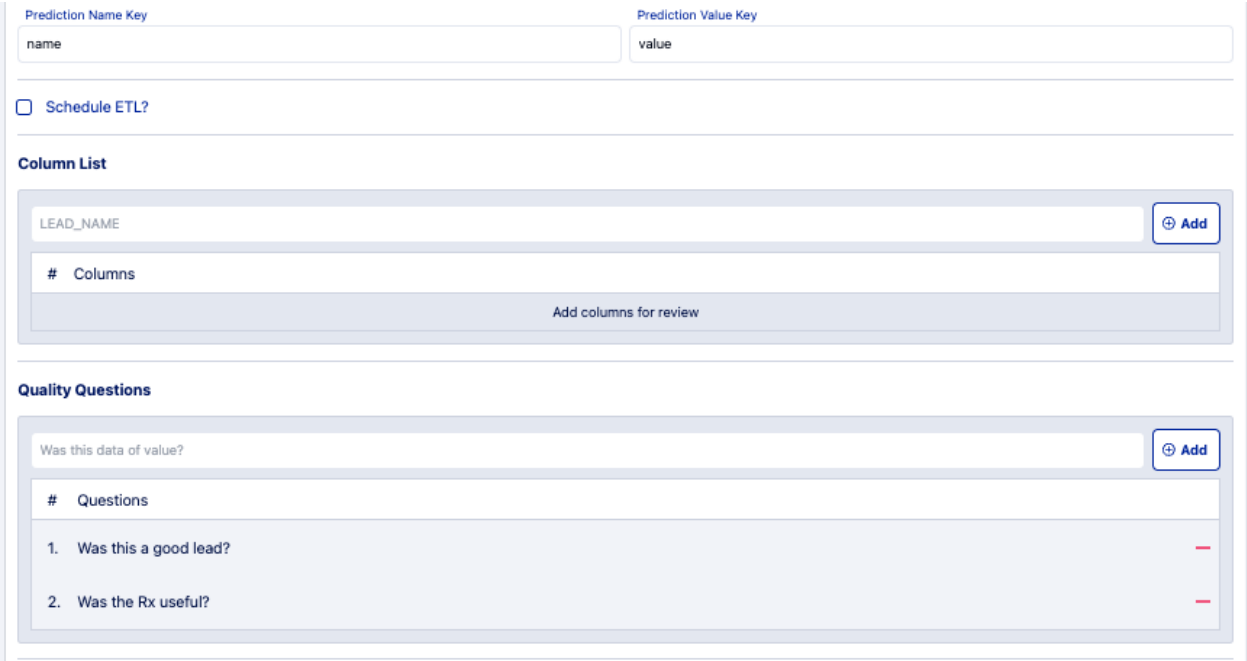
Model Feedback:

- Select ‘Model Feedback’ from the dropdown
- + Add ‘Does this model help you in your workflow?’ to the questions pane. Provide ‘yes’ and ‘no’ as answers
- **Save Changes**



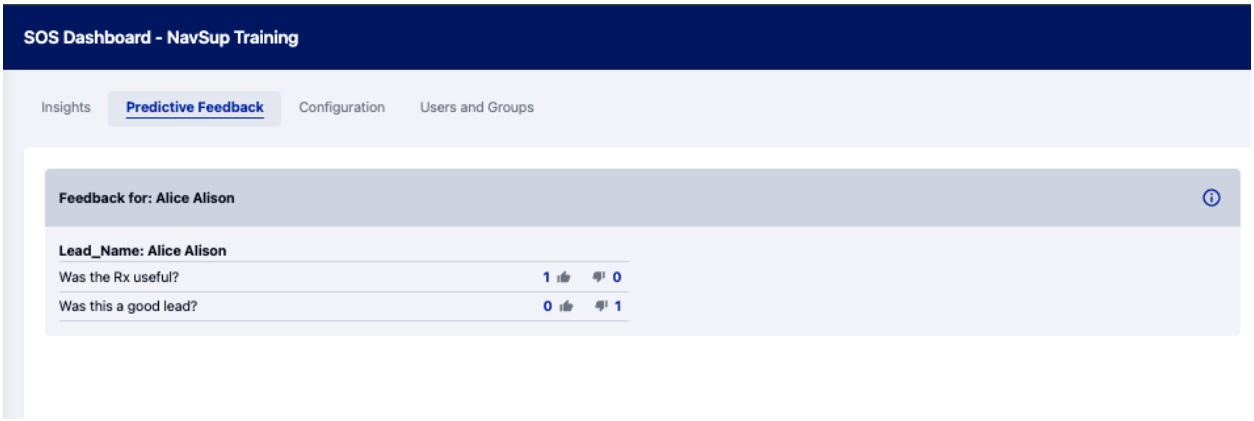
SimpleFeedback:

- Select ‘SimpleFeedback’ from the dropdown
- Prediction Name Key: name
- Prediction Value Key: value
- + Add ‘Was this a good lead?’
- + Add ‘Was the Rx useful?’
- **Save Changes**



Now let’s play the model card on the following webpage: https://simplecrm--z5rtng5.icyisland-51434260.eastus.azurecontainerapps.io/

We can toggle all of the sizing options as preferred. Let’s provide some feedback as we did earlier.


SOS Dashboard - NavSup Training
Insights
Predictive Feedback
Configuration
Users and Groups
Feedback for: Alice Alison
Lead_Name: Alice Alison
Was the Rx useful?
1
0
Was this a good lead?
0
1