

AgentCORE User Manual

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AgentCORE Platform – User Manual

1. Introduction

Welcome to the AgentCORE Platform – your end-to-end solution for managing machine learning workflows from data ingestion to model deployment.

This manual is intended for:

- Data Scientists
- ML Engineers
- DevOps Engineers
- Project Managers

It will guide you through using the platform to build, train, deploy, and monitor machine learning models on your choice of cloud or on-premises servers.

AgentCORE platform can be accessed via

- Command line interface (CLI)
- Web application

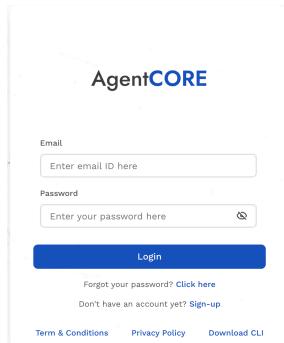
2. Getting Started with AgentCORE Web application.

2.1 System Requirements

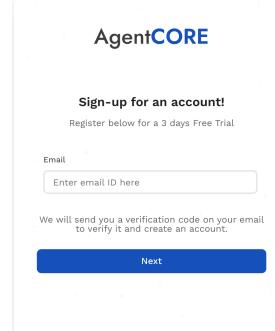
- Web browser (Chrome, Edge, or Firefox)
- Internet access
- Access credentials (provided by your admin. For 3 days trial you can create account by signing up on our website)

2.2 Signup for trail account

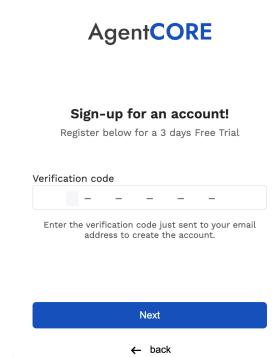
- Go to: <https://agentcore.coreops.ai>



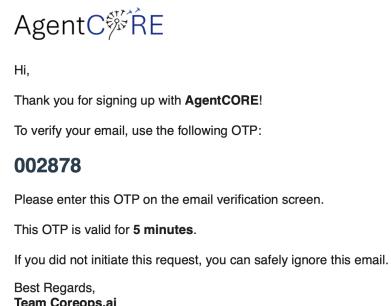
- Read the Terms & Conditions, Privacy Policy before signing up for trial account.
- Click on Sign-up link(<https://agentcore.coreops.ai/sign-up/send-otp/>)



- Enter your correct email id where you can receive the OTP.



- You will receive OTP in your email. Check your email.



- Check your email as you will receive OTP in the email.
- After entering incorrect OTP for 3 times, the application will restrict user to register from same email id for next 1 hour.

- After entering the OTP you will be redirected to Sign-up for an account.

The screenshot shows the AgentCORE sign-up page. At the top, it says "AgentCORE" and "Sign-up for an account!". Below that, a message says "Register below for a 3 days Free Trial". There are three input fields: "Name" with placeholder "Enter your name", "Password" with placeholder "Choose a password" and a visibility icon, and "Company Name" with placeholder "Enter your company name". At the bottom, there's a blue "Create account" button, a small note about agreeing to Privacy Policy and Terms of Service, and links for "Forgot your password?" and "Don't have an account yet? Sign-up".

- Enter your full name (First Name and Last name), Password and Company Name. Remember that your password should be 6–20 chars with uppercase, lowercase, a number, and a special character.
- On successful signup, you will be redirected to Login screen -
<https://agentcore.coreops.ai/login/>

2.3 Login

- Go to: <https://agentcore.coreops.ai>

The screenshot shows the AgentCORE login page. It has two input fields: "Email" with placeholder "Enter email ID here" and "Password" with placeholder "Enter your password here" and a visibility icon. Below the fields is a blue "Login" button. Underneath the button, there are links for "Forgot your password? Click here" and "Don't have an account yet? Sign-up". At the bottom, there are links for "Term & Conditions", "Privacy Policy", and "Download CLI".

- Enter your email id that you used to register for trail account.
- Enter the Password and click Login. You will sign-in to AgentCORE platform.

2.4 Forgot password

- In case you forgot your password then you can click on
<https://agentcore.coreops.ai/forgot-password/>

AgentCORE

Reset your password

Email

We will send you a reset code to your email which can be used to reset your password.

Next

[Click here to login](#)

- Enter your email id registered with AgentCORE platform only or else you won't be able to get the OTP.

AgentCORE

Reset your password

Verification code

8	5	0	6	8	0
---	---	---	---	---	---

Enter the verification code received on your registered email address.

Next

[Click here to login](#)

- Enter the OTP that you have received in your email and hit next. After successful verification you will be redirected to Change your password.

AgentCORE

New Password

Confirm Password

Submit

[Click here to login](#)

- Enter your new password and hit submit. Your new password will be set and can login to AgentCORE application using registered email address and changed password.

3. Getting Started with AgentCORE CLI.

3.1 System Requirements

- OS(Windows, Linux, Ubuntu, Mac). In this user manual, showing steps executed on Macbook terminal. Steps on other OS will remain same.

- Internet access
- Access credentials (provided by your admin. For 3 days trial you can create account by signing up on our website or)

3.2 Setup CLI on your system.

- Open terminal and create the python environment to run the CLI. Using Conda package manager to create environment. User can create python environment by any tool. Strongly recommend to create new environment.

```
$ >conda create -n AgentCORE_CLI python==3.12
```

- Activate the python environment.

```
$ conda activate AgentCORE_CLI
```

- Download the CLI from AgentCORE github.

```
(AgentCORE_CLI) $ >git clone git@github.com:CoreOps-AI/agentcore-cli.git
Cloning into 'agentcore-cli'...
remote: Enumerating objects: 70, done.
remote: Counting objects: 100% (70/70), done.
remote: Compressing objects: 100% (68/68), done.
remote: Total 70 (delta 9), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (70/70), 136.22 KiB | 358.00 KiB/s, done.
Resolving deltas: 100% (9/9), done.
```

- Agentcore-cli folder will be created. Get into that folder and install the required libraries.

```
(AgentCORE_CLI) $ >cd agentcore-cli/
(AgentCORE_CLI) $ >pip install -r requirements.txt
```

- After installing the libraries. Setup the agentcore cli application by running below command.

```
(AgentCORE_CLI) $ >pip install .
```

- You can use **agentcore** and its short command **ag** to perform machine learning operations. To find all the available commands, type:

```
(AgentCORE_CLI) $ >agentcore
```

or

```
(AgentCORE_CLI) $ >agentcore --help
```

or

```
(AgentCORE_CLI) $ >ag  
or  
(AgentCORE_CLI) $ >ag --help
```

Usage: ag [OPTIONS] COMMAND [ARGS]...

AgentCORE CLI - Manage your ML projects with ease.

- View all the commands.

```
(AgentCORE_CLI) $ >ag  
Usage: ag [OPTIONS] COMMAND [ARGS]...  
  
AgentCORE CLI – Manage your ML projects with ease.  
  
Options:  
  --debug  Enable debug logging  
  --help   Show this message and exit.  
  
Commands:  
  change-password  Interactive process to change user password.  
  config           Configuration management commands.  
  credentials      Credentials management commands.  
  data              Experiments management commands.  
  deploy            Deployment management commands.  
  experiments      Experiments management commands.  
  instances         instance management commands.  
  list              List all commands, including subcommands, with...  
  login             Interactive login command.  
  logout            Logout from System.  
  observability    Project observability management commands.  
  projects          Project management commands.  
  reset-password   Interactive process to reset user password.  
  signup            Interactive signup command with 3-step process.  
  users             User management commands.
```

- Configuration management commands.

```
(AgentCORE_CLI) $ >ag config  
Usage: ag config [OPTIONS] COMMAND [ARGS]...  
  
Configuration management commands.  
  
Options:  
  --help  Show this message and exit.  
  
Commands:  
  set-url  Set the API base URL.  
  view     View current configuration including logged-in user details...
```

- Credentials management commands.

```
(AgentCORE_CLI) $ >ag credentials
Usage: ag credentials [OPTIONS] COMMAND [ARGS]...

    Credentials management commands.

Options:
    --help Show this message and exit.

Commands:
    aws      Manage AWS credentials: view (get) or add (post).
    github   Create a user credential for one of the available credential...
    view     View credentials created by user.
```

- Data related commands.

```
(AgentCORE_CLI) $ >ag data
Usage: ag data [OPTIONS] COMMAND [ARGS]...

    Experiments management commands.

Options:
    --help Show this message and exit.

Commands:
    connect   Create a datasource with improved UX
    fetch     Fetch data from a source and create an initial RAW data...
    history   View the history (ancestry and descendants) of a data version
    operations Create a data processing operation with enhanced UI
    preview   Fetch data from a source and create an initial RAW data...
    transform  Transform an existing data version by applying operations...
    view      Datasources view command with tables formatted to match the...
```

- Deployment management commands.

```
(AgentCORE_CLI) $ >ag deploy
Usage: ag deploy [OPTIONS] COMMAND [ARGS]...

    Deployment management commands.

Options:
    --help Show this message and exit.

Commands:
    compare   Compare metrics of deployments
    create    Create a new deployment for an experiment.
    override  Override the status of a deployment
    production Deploy project to production
    ready     View promoted experiments for a specific project.
    view      View all deployments.
```

- Experiments management commands.

```
(AgentCORE_CLI) $ >ag experiments
Usage: ag experiments [OPTIONS] COMMAND [ARGS]...

    Experiments management commands.

Options:
    --help Show this message and exit.

Commands:
    compare      Fetch experiment run metrics by project ID with...
    config       View the full configuration of a specific experiment
    logs         View live logs for a running experiment.
    metrics      View metrics for experiments in a specific project
    models       Fetch models details by project type and project.
    plots        View plots for a specific experiment
    promote      Promote an experiment to production.
    rerun        Rerun a previous experiment with editable configuration.
    run          Run an experiment with selected project, instance, and...
    system-metrics View system metrics for experiments in a specific project
    view         View Experiments with Project ID
```

- Instance management commands.

```
(AgentCORE_CLI) $ >ag instances
Usage: ag instances [OPTIONS] COMMAND [ARGS]...

    instance management commands.

Options:
    --help Show this message and exit.

Commands:
    action      Start or Stop an instance.
    create      Create instance.
    instance-types Show AWS instance types of a region with tab-completion...
    pricing     Fetch cloud pricing for a specific provider, instance...
    regions    Show cloud instance regions.
    update      Update an instance
    view        Show instance details or list instances under a project...
```

- Project observability management commands.

```
(AgentCORE_CLI) $ >ag observability
Usage: ag observability [OPTIONS] COMMAND [ARGS]...

    Project observability management commands.

Options:
    --help Show this message and exit.

Commands:
    metrics   View Observability Metrics for a Deployment
    view      View Deployments for a Project
```

- Project management commands.

```
(AgentCORE_CLI) $ >ag projects
Usage: ag projects [OPTIONS] COMMAND [ARGS]...

    Project management commands.

Options:
    --help Show this message and exit.

Commands:
    archive      Archive or Unarchive a project.
    assign-user   Assigns users to the project
    create        Create a new project through an interactive prompt.
    github        Set or update GitHub repository URL for a project.
    metrics       View project metrics.
    update        Update an existing project by its ID.
    view          View all projects with pagination and table display.
```

- User related commands

```
(AgentCORE_CLI) $ >ag users
Usage: ag users [OPTIONS] COMMAND [ARGS]...

    User management commands.

Options:
    --help Show this message and exit.

Commands:
    assign-role   Assign role to an user by their ID.
    create        Create a new user.
    delete        Delete an existing user by their ID.
    update        Update an existing user by their ID.
    view          View all users with formatting and pagination.
```

3.3Check the current configuration.

```
(AgentCORE_CLI) $ >ag config view
Current Configuration
```

Setting	Value
API URL	https://agentcoredemo.coreops.ai/
Token	Not Set
Logged In Time	Not Set
User Info	Not logged in

Please note the URL of AgentCORE platform is <https://agentcore.coreops.ai> and it should be set before we sign in or do any operations.

3.4 Signup for trail account

```
(AgentCORE_CLI) $ >ag signup
User Registration (interactive mode)
Press Ctrl+C at any time to cancel

Enter your email: [REDACTED] aya@coreops.ai
OTP sent [REDACTED] aya@coreops.ai
Please check your email for the OTP
Please enter OTP (Attempt 1/3): 047564
OTP verified successfully!

Terms and Conditions & Privacy Policy
• Terms and Conditions: https://agentcoredemo.coreops.ai/term-conditions/
• Privacy Policy: https://agentcoredemo.coreops.ai/privacy-policy/

Do you confirm that you have read and agree to the above Terms and Conditions and Privacy Policy? [YES/NO] (NO): YES

Please provide your details to complete registration:

Full Name: [REDACTED] aya
Organization: CoreOps.AI
Enter password: *****
Confirm password: *****
Registration completed successfully!
Welcome! You can now login with your credentials.
```

- Please enter the working email to receive the OTP. Password and other restriction is same as we have in the web interface.
- You have to agree to Terms and condition and Privacy Policy to register on AgentCORE platform.
- Following welcome email will be received on registered email id.

AgentCORE

Hi Tarun,

Welcome to AgentCORE! We're excited to have you join us.

Your demo account is now active, giving you access to explore AgentCORE for the next **3 days**.

Explore features designed to streamline your machine learning workflow and simplify end-to-end ML operations.

Your trial will expire on: 21 July 2025

Ready to get started?

Access your dashboard here: <https://agentcore.coreops.ai>

If you need any assistance, please contact our support team at support-agentcore@coreops.ai. We're here to help!

Thank you for choosing AgentCORE.

Enjoy your trial!

Best Regards,
Team Coreops.ai

3.5 Login and check the user details.

```
(AgentCORE_CLI) $ >ag login
Logging in new user (interactive mode)
Press Ctrl+C at any time to cancel

Email of user: [REDACTED]@coreops.ai
Enter password: *****
Login successful! Tokens and credentials saved.
(AgentCORE_CLI) $ >ag config view
Current Configuration

Setting          Value
API URL          https://agentcoredemo.coreops.ai/
Token            Set
Logged In Time   2025-07-18 16:14:16

---- Logged-In User Information ----
Email            [REDACTED]@coreops.ai
Full Name        [REDACTED]
Status           Active
Roles            DEMO
```

- During the trial version user will automatically assign DEMO user role. In this role user can perform
 - o Create & manage only one instance(t2.micro) with flexibility to setup his own AWS instance.
 - o Create Data source, preprocess them and perform feature engineering.
 - o Run multiple experiments (Timeseries, Classification, Regression)
 - o Select the experiment to promote to Staging.
 - o Run the experiments in staging with new data and generate the model.
 - o Dockerize the model and run it as the FastAPI service on same instance.

3.6 Forgot password

- If you forgot the password, then you can reset it by using ag reset-password.

```
(AgentCORE_CLI) $ >ag reset-password
Enter your email: [REDACTED]@coreops.ai
If an account with that email exists, an OTP has been sent.
Please check your mail for the OTP
Please enter OTP (Attempt 1/3): 969534
OTP verified successfully.

Enter new password: *****
Confirm new password: *****
Password reset successfully
```

3.7Create Projects

The CLI tool provides an interactive command for creating new machine learning projects. Follow the steps below to create a new project.

Command:

```
ag projects create
```

Once the command is executed, you will be prompted to provide the following inputs:

Field	Description
Project Name	A unique name for your ML project.
Description	A short description about the goal of the project.
Start Date	The project start date in YYYY-MM-DD format.
Finish Date	The expected project end date in YYYY-MM-DD format.

For Project type, press Tab to find the suggestion.

```
(AgentCORE_CLI) $ >ag projects create
Create New Project

Project Name: Sales Forecasting
Project Description: Creating a project to build machine learning model to predict car sales.
Start Date (YYYY-MM-DD) (2025-07-20):
Finish Date (YYYY-MM-DD) (2025-07-21): 2025-07-30

Enter Project Type (press Tab for suggestions, Enter for selection, or just Enter to keep current):
Type partial name and press Tab for suggestions.
Project Types > Anomaly Detection (Visual)
Classification
Computer Vision
Image Classification
Image Segmentation
OCR (Image to Text)
Object Detection
```

After providing all the required project details, it will ask to review the project details before creation:

- Name: Sales Forecasting
- Description: Creating a project to build machine learning model to predict car sales.
- Status: planned
- Start: 2025-07-20

- Finish: 2025-07-30
- Project_Type_Id: Timeseries

Once project details are confirmed by typing “yes”, project gets created.

```
(AgentCORE_CLI) $ >ag projects create
Create New Project
Project Name: Sales Forecasting
Project Description: Creating a project to build machine learning model to predict car sales.
Start Date (YYYY-MM-DD) (2025-07-20):
Finish Date (YYYY-MM-DD) (2025-07-21): 2025-07-30
Enter Project Type (press Tab for suggestions, Enter for selection, or just Enter to keep current):
Type partial name and press Tab for suggestions.
Project Types > Timeseries
Selected Project Type: Timeseries
Selected Project Type Details:
Selected Project Type (Total: 1)


| ID | Type Name  | Description       |
|----|------------|-------------------|
| 7  | Timeseries | Timeseries Models |


You selected project type: Timeseries (ID: 7)

Project Summary
Name: Sales Forecasting
Description: Creating a project to build machine learning model to predict car sales.
Status: planned
Start: 2025-07-20
Finish: 2025-07-30
Project_Type_Id: 7
Create project? [yes/no] (yes): yes
Project created successfully

Created Project (Total: 1)


| ID | Name              | Status  | Start                  | Finish                 | Description                                                              | Users      | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------------------|------------------------|--------------------------------------------------------------------------|------------|------------|--------------|-------------|
| 18 | Sales Forecasting | planned | 2025-07-20<br>00:00:00 | 2025-07-30<br>00:00:00 | Creating a project to build machine learning model to predict car sales. | [REDACTED] | 1          | Timeseries   | False       |


```

3.8View the created projects

Type following command to view the number of projects created by user:

Command:

ag projects view

```
(AgentCORE_CLI) $ >ag projects view
Choose an option to view projects:
1. All Projects
2. Active Projects
3. Archived Projects [1/2/3] (1): 1
=====
Page 1 of 1 | Page Size: 10
Showing all 1 items
Selection Mode: ON - You can select items using [option]
=====
All Projects (Total: 1)


| # | ID | Name              | Status  | Start      | Finish     | Description                                                              | Users      | User Count | Project Type | Is Archived |
|---|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|------------|------------|--------------|-------------|
| 1 | 18 | Sales Forecasting | planned | 2025-07-20 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED] | 1          | Timeseries   | False       |


[s] Search/Filter | [r] Select Item | [q] Quit
Enter your choice: q
(AgentCORE_CLI) $
```

3.9Update project details

If any project details need to be updated then type following command

Command:

ag projects update

Please note: This feature is not available in the trial version.

3.10 Update github details

Developers can save their work to their own github. They can provide their github details to AgentCORE so that platform checkin their work when project is deployed to stagging environment.

Command:

ag projects github

It will ask you to select the project to which you want to checkin your github URL. Provide the already created repository or else it won't work.

```
(AgentCORE_CLI) $ >ag projects github
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)
+---+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ID | Name | Status | Start | Finish | Description | Users | User Count | Project Type | Is Archived |
+---+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1 | Timeseries | False |
+---+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

After selecting the project and providing confirmation, application will successfully setup the user github account and confirmation message is provided. Please note- If only one project is available then AgentCORE will automatically select the available project.

```
GitHub repository URL: https://github.com/CoreOps-AI/Testing.git
Checking if project already has a GitHub URL...
No existing GitHub URL found. Creating new one...
GitHub URL created successfully
Project: Sales Forecasting
Updated at: 2025-07-23T09:31:40.280Z
Project GitHub URL Created Successfully
+---+-----+
| Field | Value |
+---+-----+
| Project ID | 31 |
| GitHub Repository URL | https://github.com/CoreOps-AI/Testing.git |
| Operation | Create |
```

3.11 Setup credentials

User can save their application secret token in AgentCORE so that they can use their resources in building the machine learning models. They can setup their own cloud server tokens, Github tokens.

To setup github credentials, type the following command

Command:

ag credentials github

```
(AgentCORE_CLI) $ >ag credentials github

Create User Credential

Enter Credential Type/ID(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Credential Types > GitHub Credentials(5)

 Selected Credential Type:
Name: GitHub Credentials
Description:

Enter Credential Name: GithubRepo
Enter Github Token: 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
Enter Git Email: jai.arora@coreops.ai
Enter Git Username: jaiarora
Credentials (Total: 1)

| ID | Name       | Github Token                             | Git Email            | Git Username     |
|----|------------|------------------------------------------|----------------------|------------------|
| 20 | GithubRepo | 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 | jai.arora@coreops.ai | jaiarora-coreops |


```

3.12 Connect to different data sources

For machine learning experiments, user can connect the data sources to the AgentCORE platform by typing following command.

Command:

ag data connect

Data fetching activity is 6 steps process:

- ## 1) Choose your Data Source

```
(AgentCORE_CLI) $ >ag data connect  
🚀 Welcome to Datasource Creation Wizard
```

Step 1: Choose Datasource Type

1. Database
Connect to MySQL databases
 2. API
Connect to REST APIs
 3. File
Upload and process files (CSV, JSON, etc.)

Type partial name and press Tab for suggestions.
Select datasource type (name or ID) > 1

Selected: Database

- 2) Provide basic information of the project.

Step 2: Basic Information

Enter Description: Fetch the Kia sales raw data from the external MYSQL database for ML experiments

- 3) Assign the data source to the selected project

Step 3: Project Selection

Enter Project Name/ID (press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.

Projects > Sales Forecasting(18)

Selected Project Details									Selected Project (Total: 1)		
ID	Name	Status	Start	Finish	Description	Users	User Count	Project Type	Is Archived		
18	Sales Forecasting	planned	2025-07-20	2025-07-30	Creating a project to build machine learning model to predict car sales.	██████████@coreops.ai	1	Timeseries	False		

4) Configure Datasource

```
Step 4: Datasource Configuration
Database Configuration

Available database types:
1. MySQL (Available)
2. PostgreSQL (Not available in trial version)
3. SQLite (Not available in trial version)
4. Oracle (Not available in trial version)
5. SQL Server (Not available in trial version)

Enter Database type (mysql): 1
Enter Host (default: localhost) (localhost):
Enter Port (default: 3306) (3306): 3307
Enter Username: django_user

Enter password: *****
Enter Database name: customer_db
Enter Table name: raw_data
```

5) Review and confirm the details provided to fetch the data from source

```
Step 5: Review & Confirm

Datasource Summary:
data_source_type_id: 1
description: Fetch the Kia sales raw data from the external MYSQL database for ML experiments
project_id: 18
connection_url: *****
db_type: mysql
port: 3307
host: localhost
user_name: django_user
password: *****
db_name: customer_db
db_table: raw_data
data_type_id: 1

Create this datasource? [yes/no] (yes): yes
```

6) Create Datasource

Step 6: Creating Datasource...

🎉 Datasource Created Successfully!

Datasource ID: 22

.datasource-information

Property	Value
ID	22
Description	Fetch the Kia sales raw data from the external MySQL database for ML experiments
Source Type	MySQL
Data Source Type	1
Projects	Sales Forecasting

.datasource-connection-details

Property	Value
Database Type	MYSQL
Host	localhost
Port	3306
Database Name	customer_db
Table Name	raw_data
Username	django_user
Password	*****
Connection URL	mysql+mysqlconnector://@localhost:3306/...

3.13 Fetch the data from attached source

After connecting to the data source, user can fetch the data from the created data source. The command to fetch the data from data source is.

Command:

ag data fetch

Fetching the data is also a multi-step:

- 1) Select the data source to fetch the data.

```
(AgentCORE CLI) $ >ag data fetch
Fetching available data sources...
Enter ID-Type(description)(press Tab for suggestions and Press Enter for Datasource Selection):
Type partial name and press Tab for suggestions.
Datasources > 11-MySQL(Fetch the Kia sales raw data from the external MYSQL database for ML experiments)
Selected Datasource: 11-MySQL(Fetch the Kia sales raw data from the external MYSQL database for ML experiments)
Selected Datasource Details:
Selected Datasource (Total: 1)
+---+----+-----+-----+-----+-----+
| ID | Source Type | Description | Created By | Created At | Data Source Type | Project |
+---+----+-----+-----+-----+-----+
| 11 | MySQL | Fetch the Kia sales raw data from the external MYSQL database for ML experiments | - | None | 1 | Sales Forecasting |
+---+----+-----+-----+-----+-----+
Selected Data Source ID: 11
Do you want to preview the data source first? [y/n] (y): n
```

- 2) AgentCORE has various data operations functions. You can set the preprocessing and feature engineering functions so that data is ready for the ML experiments.

```
Setting up transformation operations during fetch
Available Operations:
Operations
+---+----+-----+-----+-----+
| ID | Name | Description | Type | Required Params |
+---+----+-----+-----+-----+
| 34 | Drop Columns | Remove columns from the dataset | DROP | ["columns"] |
| 35 | Rename Columns | Rename columns in the dataset | RENAME | ["rename dict"] |
| 36 | Fill Missing Values | Fill missing values in tabular data | FILL_NA | ["value"] |
| 37 | Normalize Data | Normalize numerical columns to 0-1 range | NORMALIZE | [] |
| 38 | Normalize Text | Normalize text (lowercase, remove special chars) | NORMALIZE | [] |
| 39 | Resize Images | Resize images to specified dimensions | RESIZE | ["width", "height"] |
| 40 | SQL Transformation | Transform data using SQL query | SQL_TRANSFORM | ["sql_query"] |
+---+----+-----+-----+-----+
Enter Operation ID (or leave empty to finish): 40
Enter value for sql_query: SELECT date_sold, COUNT(*) AS car_model_count FROM df WHERE car_model = 'Kia Selto' GROUP BY date_sold;
Added operation: ID 40 with parameters: {"sql_query": "SELECT date_sold, COUNT(*) AS car_model_count FROM df WHERE car_model = 'Kia Selto' GROUP BY date_sold;"}
Add another operation? [y/n] (n): n
Final Operations:
[{"operation_id": 40, "parameters": {"sql_query": "SELECT date_sold, COUNT(*) AS car_model_count FROM df WHERE car_model = 'Kia Selto' GROUP BY date_sold;"}]
Fetch Summary:
Data Source ID: 11
Operations: [
  {"operation_id": 40, "parameters": {"sql_query": "SELECT date_sold, COUNT(*) AS car_model_count FROM df WHERE car_model = 'Kia Selto' GROUP BY date_sold;"}}
]
Start data fetch? [yes/no] (yes): yes
```

- 3) Take the confirmation from the user to fetch the data and transform it on the fly.

```
Start data fetch? [yes/no] (yes): yes
Data fetch initiated:
Version ID: 35
Task ID: 2865fdfa-a834-4d16-a7fc-e79eaaec5517

Monitoring task progress...
Status: RUNNING
```

- 4) Preview the fetch data.

```

/Data fetch completed successfully!
Fetch Result:
Total Rows: N/A
Status: success
Columns: date_sold, car_model_count
Version ID: 33

Do you want to preview the data version? [y/n] (y): y
Data Version Preview:
Total Rows: 427
Total Columns: 2

Data Preview
date_sold | car_model_count
2023-01-06 | 99
2023-01-04 | 127
2023-01-09 | 98
2023-01-05 | 103
2023-01-01 | 105
2023-01-13 | 101
2023-01-02 | 109
2023-01-07 | 122
2023-01-08 | 124
2023-01-15 | 112

```

3.14 Check data history details

To check the history of the data.

Command:

ag data history

```

(AgentCORE_CLI) $ >ag data history
Select available data source...
Enter ID-Type(description)(press Tab for suggestions and Press Enter for Datasource Selection):
Type name and press Tab for suggestions.
Datasources > 22-MySQL(Fetch the Kia sales raw data from the external MySQL database for ML experiments)

Selected Datasource: 22-MySQL(Fetch the Kia sales raw data from the external MySQL database for ML experiments)
Selected Datasource Details:
Selected Datasource (Total: 1)
ID | Source Type | Description | Created By | Created At | Data Source Type | Project
22 | MySQL | Fetch the Kia sales raw data from the external MySQL database for ML experiments | - | None | 1 | Sales Forecasting

Selected Data Source ID: 22
Data Versions (Total: 1)
ID | Data Source Description | Created By | Created At | Stage
76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | coreops.ai | 2025-07-23T09:45:13.805093Z | RAW

Enter ID from above table: 76
Fetching history for version 76...
Data Version History:
Version ID: 76
Data Source ID: 22
Created By: coreops.ai
Created At: 2025-07-23 09:45:13

Version Details:
Version ID: 76
Data Source ID: 22
Created By: coreops.ai
Created At: 2025-07-23 09:45:13

Ancestry Transformations:
Transformation ID: 71
Source Version ID: None
Status: COMPLETED
Created At: 2025-07-23 09:45:13

Ancestry - Transformation 71
Steps for Transformation 71
Order | Operation | Type | Stage | Parameters
0 | SQL Transformation | SQL_TRANSFORM | RAW | {
    "sql_query": "SELECT date_sold, COUNT(*) AS car_model_count FROM df WHERE car_model = 'Kia Seltos' GROUP BY date_sold;"
}
No descendant versions found.

```

3.15 Preview the data fetched

To fetch the sample data along with key details of the data.

Command:

ag data preview

```
(AgentCORE_CLI) $ ag data preview
Select available data source...
Enter ID-Type(description)(press Tab for suggestions and Press Enter for Datasource Selection):
Type partial name and press Tab for suggestions,
Datasources > 11-MySQL(Fetch the Kia sales raw data from the external MYSQL database for ML experiments)
Selected Datasource Details:
Selected Datasource (Total: 1)


| ID | Source Type | Description                                                                      | Created By | Created At | Data Source Type | Project           |
|----|-------------|----------------------------------------------------------------------------------|------------|------------|------------------|-------------------|
| 11 | MySQL       | Fetch the Kia sales raw data from the external MYSQL database for ML experiments | -          | None       | 1                | Sales Forecasting |


Selected Data Source ID: 11
Data Versions (Total: 1)


| ID | Data Source Description                                                          | Created By            | Created At                  | Stage |
|----|----------------------------------------------------------------------------------|-----------------------|-----------------------------|-------|
| 35 | Fetch the Kia sales raw data from the external MYSQL database for ML experiments | [REDACTED]@coreops.ai | 2025-07-26T11:12:03.769437Z | RAW   |


Enter ID from above table: 35
 Data from Data Version fetched successfully!
Total Rows: 2


| Date_Sold  | Car_Model_Count |
|------------|-----------------|
| 2023-01-06 | 99              |
| 2023-01-04 | 127             |
| 2023-01-09 | 90              |
| 2023-01-05 | 103             |
| 2023-01-01 | 105             |
| 2023-01-03 | 121             |
| 2023-01-02 | 109             |
| 2023-01-07 | 122             |
| 2023-01-08 | 124             |
| 2023-01-15 | 112             |


```

3.16 View the data source details

Datasources view command to show the Datasource details including table name, database name and other connection details.

```
(AgentCORE_CLI) $ ag data preview
Select available data source...
Enter ID-Type(description)(press Tab for suggestions and Press Enter for Datasource Selection):
Type partial name and press Tab for suggestions,
Datasources > 22-MySQL(Fetch the Kia sales raw data from the external MySQL database for ML experiments)
Selected Datasource Details:
Selected Datasource (Total: 1)


| ID | Source Type | Description                                                                      | Created By | Created At | Data Source Type | Project           |
|----|-------------|----------------------------------------------------------------------------------|------------|------------|------------------|-------------------|
| 22 | MySQL       | Fetch the Kia sales raw data from the external MySQL database for ML experiments | -          | None       | 1                | Sales Forecasting |


Selected Data Source ID: 22
Data Versions (Total: 1)


| ID | Data Source Description                                                          | Created By            | Created At                  | Stage |
|----|----------------------------------------------------------------------------------|-----------------------|-----------------------------|-------|
| 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | [REDACTED]@coreops.ai | 2025-07-23T09:45:13.805093Z | RAW   |


Enter ID from above table: 76
 Data from Data Version fetched successfully!
Total Rows: 427
Total Columns: 2


| Date_Sold  | Car_Model_Count |
|------------|-----------------|
| 2023-01-07 | 122             |
| 2023-01-08 | 124             |
| 2023-01-09 | 90              |
| 2023-01-01 | 105             |
| 2023-01-05 | 103             |
| 2023-01-02 | 109             |
| 2023-01-06 | 99              |
| 2023-01-04 | 127             |
| 2023-01-03 | 121             |
| 2023-01-17 | 132             |


```

3.17 Create instance to run machine learning experiments

User can create server instance on which machine learning experiments can be run. The instance can be created on the cloud hyperscaler or on-premise server.

Command:

ag instances create

It is a multistep process to create an instance.

Step 1 – Identify & select the project for which instance is to be created.

```
[AgentCORE_CLI] $ #ag instances create
Creating new Instance (interactive mode)

Enter Project Name/ID (press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)

✓ Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
                                         Selected Project (Total: 1)

+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ID | Name | Status | Start | Finish | Description | Users | User Count | Project Type | Is Archived |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1 | Timeseries | False |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

Type partial name and press Tab for suggestions.
Providers > AWS

You selected AWS provider type.
```

Step 2 – Select the stage for which instance is to be created. Also provide other details according to selected option. For creation of AWS instance following details are required.

- Region
 - OS Type
 - Instance Type

In trial version, user can select only ap-south1 in AWS region, t2.micro in AWS instance type and Ubuntu in available OS.

```
Enter unique Instance Name: SFInstance

Choose a stage:
1. DEV
2. STAGING
3. PROD
[1/2/3]: 1

You selected DEV stage.

Auto-selected AWS credential: AWS (GLOBAL)

⚠Note: You are using GLOBAL credentials.
Only the following configurations are allowed:
• Region: ap-south-1
• Instance Type: t2.micro
To unlock more regions and instance types, please use your own AWS keys.
To save your keys you can use 'agentcore config aws' command.

Enter region (press Tab for suggestions):
Type partial name and press Tab for suggestions.
AWS Regions > ap-south-1

Selected region: ap-south-1
Region selected is: ap-south-1

Enter OS Type (press Tab for suggestions):
Type partial name and press Tab for suggestions.
OS Types > UBUNTU_20_04

Selected OS Type: UBUNTU_20_04

Enter Instance type (press Tab for suggestions):
Type partial name and press Tab for suggestions.
AWS Instance types > t2.micro

Selected instance type: t2.micro
instance type selected is: t2.micro
```

Step 3 – Review the provided details.

```

Instance Summary:
Provider Type: AWS
Project Id: 31
Name: SFinstance
Stage: DEV
Region: ap-south-1
Os_Type: UBUNTU_20_04
Instance Type: t2.micro
AWS Credential: AWS (GLOBAL)
Pricing for chosen region 'ap-south-1' and instance type 't2.micro' is 0.0124 USD per hour

Create Instance? [yes/no] (yes): yes

Message : AWS instance creation task queued successfully.
Task ID : b06b3a12-e30d-4920-80fe-47d3b662d314

```

User can also check the per hour cost of the server.

Step 4 – With provided details create the instance of your choice and provide the necessary details so that user can use it.

Created Instance (Total: 1)							
ID	Name	Project ID	Stage	State	IP Address	Instance Type	Provider Type
23	sfinstance-dev-sales-forecasting	18	DEV	CREATING	None	t2.micro	AWS

Do you want to track status? [yes/no] (yes): yes																									
Monitoring task status... Press Ctrl+C to stop																									
Task Status Summary																									
<table border="1"> <thead> <tr><th>Field</th><th>Value</th></tr> </thead> <tbody> <tr><td>Task ID</td><td>08cf6e38-f855-40d7-9fc6-bc152269c83d</td></tr> <tr><td>Task Status</td><td>COMPLETED</td></tr> <tr><td>Created At</td><td>2025-07-20 17:45:45</td></tr> <tr><td>Updated At</td><td>2025-07-20 17:46:45</td></tr> <tr><td>Instance State</td><td>RUNNING</td></tr> <tr><td>Result Status</td><td>COMPLETED</td></tr> <tr><td>Message</td><td>Operation completed successfully</td></tr> <tr><td>Instance ID</td><td>23</td></tr> </tbody> </table>								Field	Value	Task ID	08cf6e38-f855-40d7-9fc6-bc152269c83d	Task Status	COMPLETED	Created At	2025-07-20 17:45:45	Updated At	2025-07-20 17:46:45	Instance State	RUNNING	Result Status	COMPLETED	Message	Operation completed successfully	Instance ID	23
Field	Value																								
Task ID	08cf6e38-f855-40d7-9fc6-bc152269c83d																								
Task Status	COMPLETED																								
Created At	2025-07-20 17:45:45																								
Updated At	2025-07-20 17:46:45																								
Instance State	RUNNING																								
Result Status	COMPLETED																								
Message	Operation completed successfully																								
Instance ID	23																								
Instance (Total: 1)																									
ID	Name	Project ID	Stage	State	IP Address	Instance Type	Provider Type																		
23	sfinstance-dev-sales-forecasting	18	DEV	RUNNING	13.235.86.186	t2.micro	AWS																		

Created Instance (Total: 1)							
ID	Name	Project ID	Stage	State	IP Address	Instance Type	Provider Type
37	sfinstance-dev-sales-forecasting	31	DEV	CREATING	None	t2.micro	AWS

Do you want to track status? [yes/no] (yes): yes																									
Monitoring task status... Press Ctrl+C to stop																									
Task Status Summary																									
<table border="1"> <thead> <tr><th>Field</th><th>Value</th></tr> </thead> <tbody> <tr><td>Task ID</td><td>b06b3a12-e30d-4920-80fe-47d3b662d314</td></tr> <tr><td>Task Status</td><td>COMPLETED</td></tr> <tr><td>Created At</td><td>2025-07-23 10:04:00</td></tr> <tr><td>Updated At</td><td>2025-07-23 10:04:56</td></tr> <tr><td>Instance State</td><td>RUNNING</td></tr> <tr><td>Result Status</td><td>COMPLETED</td></tr> <tr><td>Message</td><td>Operation completed successfully</td></tr> <tr><td>Instance ID</td><td>37</td></tr> </tbody> </table>								Field	Value	Task ID	b06b3a12-e30d-4920-80fe-47d3b662d314	Task Status	COMPLETED	Created At	2025-07-23 10:04:00	Updated At	2025-07-23 10:04:56	Instance State	RUNNING	Result Status	COMPLETED	Message	Operation completed successfully	Instance ID	37
Field	Value																								
Task ID	b06b3a12-e30d-4920-80fe-47d3b662d314																								
Task Status	COMPLETED																								
Created At	2025-07-23 10:04:00																								
Updated At	2025-07-23 10:04:56																								
Instance State	RUNNING																								
Result Status	COMPLETED																								
Message	Operation completed successfully																								
Instance ID	37																								
Instance (Total: 1)																									
ID	Name	Project ID	Stage	State	IP Address	Instance Type	Provider Type																		
37	sfinstance-dev-sales-forecasting	31	DEV	RUNNING	None	t2.micro	AWS																		

3.18 To start and stop the created instance

Start and stop the instance from the CLI. User do not have to login to cloud instance.

Command:

ag instance action

```
(AgentCORE_CLI) $ >ag instances update
This feature is not available in the trial version

(AgentCORE_CLI) $ >ag instances action
Start or Stop Instance (interactive mode)

Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(18)
```

It asks to provide the Project name to list down all the instances created for selected project.

Select the instance that you want to start or stop.

Selected Project Details:									
Selected Project (Total: 1)									
ID	Name	Status	Start	Finish	Description	Users	User Count	Project Type	Is Archived
18	Sales Forecasting	planned	2025-07-20	2025-07-30	Creating a project to build machine learning model to predict car sales.	[REDACTED]@coreop...	1	Timeseries	False
Instances of Project:Sales Forecasting									
Project Instance (Total: 1)									
ID	Name	Stage	State	Instance Type	IP Address	Created At	Updated At	Destroyed At	Running Since
23	sfinstance-dev-sales-forecasting	DEV	STOPPED	t2.micro	13.235.86.186	20th July 2025	07h 42m ago	None	None

Select Instance ID from above table: 23

Choose an action:

1. Start
2. Stop

[1/2]: 1

Choose to start or stop the project and accordingly AgentCORE CLI will perform the action. In below screenshot, user selected to start the stopped AWS instance.

```
You selected start action.

✓ Instance ID: 23
✓ Action 'start' queued successfully
─ Use this Task ID to track status: 866b03e1-d203-447d-b504-9c14d01ed629 with 'agentcore instance view' command

Do you want to track status? [yes/no] (yes): yes

Monitoring task status... Press Ctrl+C to stop

Task Status Summary


| Field          | Value                                |
|----------------|--------------------------------------|
| Task ID        | 866b03e1-d203-447d-b504-9c14d01ed629 |
| Task Status    | COMPLETED                            |
| Created At     | 2025-07-21 11:04:23                  |
| Updated At     | 2025-07-21 11:05:12                  |
| Instance State | RUNNING                              |
| Result Status  | COMPLETED                            |
| Message        | Operation completed successfully     |
| Instance ID    | 23                                   |



Updated instance details:
Instance (Total: 1)


| ID | Name                             | Project ID | Stage | State   | IP Address    | Instance Type | Provider Type |
|----|----------------------------------|------------|-------|---------|---------------|---------------|---------------|
| 23 | sfinstance-dev-sales-forecasting | 18         | DEV   | RUNNING | 13.204.79.180 | t2.micro      | AWS           |


```

3.19 To run machine learning experiments

On created instance run machine learning experiments using fetched data.

Command:

ag experiments run

Step 1: Provide the project name for which experiment is to be executed. If only one instance is mapped to the project and only one data source is created then AgentCore will use those details as default to run experiments.

```
(AgentCORE_CLI) $ >ag experiments run
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                 | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|-----------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1          | Timeseries   | False       |


Selected Project ID: 31 (Type ID: 7)
Instances for project ID 31:
Project Instances (Project ID: 31) (Total: 1)


| ID | Name                             | Stage | State   | Instance Type | IP Address   | CPU Count | Memory Size | Created At     | Updated At  | Destroyed At | Running Since | Stopped At | AWS Region | OS Type      |
|----|----------------------------------|-------|---------|---------------|--------------|-----------|-------------|----------------|-------------|--------------|---------------|------------|------------|--------------|
| 37 | sfinstance-dev-sales-forecasting | DEV   | RUNNING | t2.micro      | 35.154.12... | 2         | 1024        | 23rd July 2025 | 00h 42m ago | None         | 00h 42m       | None       | ap-south-1 | UBUNTU_20... |


Automatically selected the only available instance: sfinstance-dev-sales-forecasting (ID: 37)
Selected Instance ID: 37
Data Versions for project ID 31:
Data Versions


| ID | Data Source                                                                              | Created By            | Updated By            | Created At          | Updated At          |
|----|------------------------------------------------------------------------------------------|-----------------------|-----------------------|---------------------|---------------------|
| 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments (MySQL) | [REDACTED]@coreops.ai | [REDACTED]@coreops.ai | 2025-07-23 09:45:13 | 2025-07-23 09:45:13 |


Automatically selected the only available data version: ID: 76, Datasource: Fetch the Kia sales raw data from the external MySQL database for ML experiments
```

Step 2: Once the data source is selected, it will then ask to select the target columns and identify the features on which model training can be performed.

```

Fetching columns for data version ID 76...
Target Column Selection
Select the column your model should predict
Available Columns (Table: raw_22_76)


| Select                | ID | Column Name     | Status    |
|-----------------------|----|-----------------|-----------|
| <input type="radio"/> | 1  | date_sold       | Available |
| <input type="radio"/> | 2  | car_model_count | Available |

Selection options:

- Type column name (autocomplete available)
- Enter column number (e.g., '5')


Target column: car_model_count
Selected: car_model_count

Successfully selected target column: car_model_count

Now, let's select feature columns for your experiment:
These are the columns that will be used to predict the target.

Feature Column Selection (Target: car_model_count)
Select columns to use for prediction
Available Columns (Table: Features)


| Select                | ID | Column Name | Status    |
|-----------------------|----|-------------|-----------|
| <input type="radio"/> | 1  | date_sold   | Available |

Selection options:

- Single: column_name or number (e.g., '5' or 'age')
- Range: 1-5 (selects columns 1 through 5)
- Multiple: 1,3,5 or col1,col2,col3
- All: 'all' (select all remaining)
- Remove: -5 or -col_name (remove selection)
- Done: 'done' or Enter to finish


Selection (0 selected): all
Selected all 1 columns
Available Columns (Table: Features)


| Select                              | ID | Column Name | Status   |
|-------------------------------------|----|-------------|----------|
| <input checked="" type="checkbox"/> | 1  | date_sold   | Selected |

Selected: 1 columns

Selection options:

- Single: column_name or number (e.g., '5' or 'age')
- Range: 1-5 (selects columns 1 through 5)
- Multiple: 1,3,5 or col1,col2,col3
- All: 'all' (select all remaining)
- Remove: -5 or -col_name (remove selection)
- Done: 'done' or Enter to finish
- Clear: 'clear' (remove all 1 selections)


Selection (1 selected): done

```

Step 3: Select from the various available statistical ML models and provide the hyperparameters. Default parameters are provided, and user can modify them. In this case we are selecting Facebook Prophet model.

```

Available Model Types for Project Type ID 7:
Enter Model Name/ID(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Models > Prophet(25)

Selected Model: Prophet (ID: 25)
Selected Model Details:
    Selected Model (Total: 1)



| ID | Model Name | Description            |
|----|------------|------------------------|
| 25 | Prophet    | Prophet for Timeseries |



Hyperparameters for Model Type Prophet:

Model Hyperparameters:


| Name                    | Description                                                        | Type   | Default  |
|-------------------------|--------------------------------------------------------------------|--------|----------|
| yearly_seasonality      | Hyperparameter yearly_seasonality for machine learning models      | bool   | true     |
| weekly_seasonality      | Hyperparameter weekly_seasonality for machine learning models      | bool   | true     |
| changepoint_prior_scale | Hyperparameter changepoint_prior_scale for machine learning models | float  | 0.05     |
| seasonality_prior_scale | Hyperparameter seasonality_prior_scale for machine learning models | float  | 10.0     |
| seasonality_mode        | Auto-added for Prophet model: seasonality_mode                     | string | additive |



yearly_seasonality: Hyperparameter yearly_seasonality for machine learning models
Type: bool, Default: true
Use default value (true)? [y/n] (y): y
Set yearly_seasonality = true

weekly_seasonality: Hyperparameter weekly_seasonality for machine learning models
Type: bool, Default: true
Use default value (true)? [y/n] (y):
Set weekly_seasonality = true

changepoint_prior_scale: Hyperparameter changepoint_prior_scale for machine learning models
Type: float, Default: 0.05
Enter value for changepoint_prior_scale (0.05):
Set changepoint_prior_scale = 0.05

seasonality_prior_scale: Hyperparameter seasonality_prior_scale for machine learning models
Type: float, Default: 10.0
Enter value for seasonality_prior_scale (10.0):
Set seasonality_prior_scale = 10.0

seasonality_mode: Auto-added for Prophet model: seasonality_mode
Type: string, Default: additive
Enter value for seasonality_mode (additive):
Set seasonality_mode = additive

```

Step 4: Summary of all the hyperparameter provided. User can verify the same and also provide the train split percentage of the data.

```

Hyperparameter Summary:
yearly_seasonality: true
weekly_seasonality: true
changepoint_prior_scale: 0.05
seasonality_prior_scale: 10.0
seasonality_mode: additive
Enter train-test split ratio (default is 0.8): : 0.8
Enter experiment name (leave blank for default): : SFExperiment
Enter experiment description (leave blank for default): : Experiment for running Sales forecasting model

Complete Experiment Configuration:
Experiment Name      SFExperiment
Description          Experiment for running Sales forecasting model
Project ID           11
Project Type ID     7
Instance ID          10
Data Version ID     7
Target Column        car_model_count
Feature Columns      1 columns selected
Data Source ID       7
Train-Test Split     0.8
Model Type           Prophet (ID: 25)
Hyperparameters       5 parameters configured

```

Step 5: Once the user verifies then it asks user to start the experiment

```

Proceed with creating this experiment? [y/n]: y
Creating experiment...
Experiment created successfully!
Experiment Creation Result (Total: 1)

```

message	run_id	experiment_group_id	experiment_group_code	version	status	instance_id
New experiment launched.	122	4d706d95-57b6-4ed6-9b5f-c8c977fbe0cf	A122	1.0	requested	37

```

Would you like to monitor logs for this experiment? [y/n]: y
Starting live log monitoring...
Press Ctrl+C to stop monitoring

Starting log monitoring for experiment group A122...
Found 18 existing logs
11:28:32 [INFO] CreateNewExperiment: ExperimentConfiguration snapshot saved for Run ID=A122
11:28:32 [INFO] CreateNewExperiment: Launching remote execution thread for Run ID=A122
11:28:32 [INFO] CreateNewExperiment: New experiment launched: Run ID=A122, Group=A122
11:28:32 [INFO] CreateNewExperiment: Experiment request completed in 0.09928 seconds
11:28:32 [INFO] ExperimentRemoteMachineRunner: Run status updated to: initiating_session
11:28:32 [INFO] ExperimentRemoteMachineRunner: Attempting SSH connection to 35.154.129.27:22 as ubuntu
11:28:34 [INFO] ExperimentRemoteMachineRunner: Run status updated to: preflight_check
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Executing command: python3.12 --version
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Command failed: bash: python3.12: command not found

11:28:34 [INFO] experiments.experiment_views.remote_runner.TabularData: python3.12 not found. Falling back to check python3...
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Executing command: python3 --version
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Command output: Python 3.8.10
11:28:34 [INFO] experiments.experiment_views.remote_runner.TabularData: python3 version: Python 3.8.10
11:28:34 [INFO] experiments.experiment_views.remote_runner.TabularData: System python3 version is 3.8. Installing python3.12...
11:28:34 [INFO] experiments.experiment_views.remote_runner.TabularData: Starting Python 3.12 verification
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Executing command: python3.12 --version
11:28:34 [DEBUG] ExperimentRemoteMachineRunner: Command failed: bash: python3.12: command not found

```

The experiment runs on the user created infrastructure on feature engineered data. You do not have to wait for the project execution to complete. User can do Ctrl+c to come out from the live logs. Once the experiment is successfully complete, a machine learning model is created at remote server.

```

11:31:32 [INFO] remote_pipeline: Final artifacts: ['/home/ubuntu/A122/1.0/artifacts/system_metrics.json', '/home/ubuntu/A122/1.0/artifacts/Prophet_76_A122.pkl',
'/home/ubuntu/A122/1.0/artifacts/residuals.csv', '/home/ubuntu/A122/1.0/artifacts/122', '/home/ubuntu/A122/1.0/artifacts/metrics.json',
'/home/ubuntu/A122/1.0/artifacts/residual_histogram.png', '/home/ubuntu/A122/1.0/artifacts/forecast.png']
11:31:32 [INFO] remote_pipeline: Pipeline execution completed successfully!
11:31:33 [INFO] ExperimentRemoteMachineRunner: Attempting SSH connection to 35.154.129.27:22 as ubuntu
11:31:34 [INFO] ExperimentRemoteMachineRunner: Disconnected from remote machine 35.154.129.27
^C
Log monitoring stopped by user.

Log Summary:
Total logs collected: 114
Log levels: { 'INFO': 88, 'DEBUG': 24, 'WARNING': 1, 'ERROR': 1 }
Sources: { 'CreateNewExperiment': 4, 'ExperimentRemoteMachineRunner': 76, 'experiments.experiment_views.remote_runner.TabularData': 4, 'remote_pipeline': 29, 'RemoteRunner': 1 }


```

3.20 Compare multiple experiments metrices

User can run multiple experiments with different model templates available. After successfully running the experiments all its artifacts are version controlled. User has option to compare the experiments and can use following command for comparison.

Command:

ag experiments compare

```
(AgentCORE_CLI) $ >ag experiments compare
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)



| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                 | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|-----------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1          | Timeseries   | False       |



Selected Project ID: 31 (Type ID: 7)

Available Options:
• Group Codes: A122, A139
• Data Versions: 76
• Data Sources: Fetch the Kia sales raw data from the external MySQL database for ML experiments
• Models: Prophet
• Statuses: pipeline_completed

Choose filter:
1. By Group Code(s)
2. By Data Version(s)
3. By Model(s)
4. Show All
Enter choice (1-4) (4): 4

Found 2 experiments

Experiments with Standard Metrics (2):
Standard Metrics (Total: 2)



| group_code | model   | data_ver_ | task_ty_   | status     | r2     | mae    | mse      | rmse   | mape  | directi_ | smape | mase  | aic     | bic     | medae  | explaine_ | version |
|------------|---------|-----------|------------|------------|--------|--------|----------|--------|-------|----------|-------|-------|---------|---------|--------|-----------|---------|
| A122       | Prophet | 76        | Timeseries | pipelin... | -0.242 | 45.376 | 4828.699 | 69.489 | 0.723 | 0.609    | 0.299 | 0.812 | 3825.69 | 3852.93 | 21.251 | 0.011     | 1.0     |
| A139       | Prophet | 76        | Timeseries | pipelin... | -0.102 | 45.822 | 4210.807 | 64.891 | 0.69  | 0.472    | 0.309 | 0.711 | 3347.8  | 3374.18 | 30.193 | -0.035    | 1.0     |



Show summary comparison? (y/n) (y): y

Summary Comparison:
Summary (Total: 2)



| group_code | model   | task_type  | mape  | mase  | smape | explained_variance | directional_accuracy | r2     |
|------------|---------|------------|-------|-------|-------|--------------------|----------------------|--------|
| A122       | Prophet | Timeseries | 0.723 | 0.812 | 0.299 | 0.011              | 0.609                | -0.242 |
| A139       | Prophet | Timeseries | 0.69  | 0.711 | 0.309 | -0.035             | 0.472                | -0.102 |


```

3.21 Details of specific experiment

To view the full configuration of a specific experiment

Command:

ag experiments config

```
(AgentCORE_CLI) $ >ag experiments config
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)



| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                 | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|-----------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1          | Timeseries   | False       |



Selected Project ID: 31 (Type ID: 7)

Total 3 Experiments found in selected project

Enter Experiment Group Code/Version(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Experiments > A122(1.0)

Selected Experiment: A122 (Version: 1.0)
Selected Experiment Details:
Selected Experiment (Total: 1)



| Experiment Group Code | Version | Data Version | Data Source                                                                      | Instance ID | Model | Executed By           | Created At          | Status             |
|-----------------------|---------|--------------|----------------------------------------------------------------------------------|-------------|-------|-----------------------|---------------------|--------------------|
| A122                  | 1.0     | 76           | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37          | -     | [REDACTED]@coreops.ai | 2025-07-23 11:28:32 | pipeline_completed |



Configuration for Experiment A122:
Basic Information



| Field           | Value                                                |
|-----------------|------------------------------------------------------|
| Experiment Code | A122                                                 |
| Experiment Name | SFExperiment                                         |
| Task            | Timeseries                                           |
| Model           | Prophet                                              |
| Version         | 1.0                                                  |
| Created By      | [REDACTED]@coreops.ai                                |
| Created At      | 2025-07-23 11:28:32                                  |
| Description     | Experiment to forecast car sales using Prophet model |


```

Model Parameters:	
Parameter	Value
seasonality_mode	additive
weekly_seasonality	true
yearly_seasonality	true
changepoint_prior_scale	0.05
seasonality_prior_scale	10.0

Data Configuration:	
Field	Value
Data ID	76
Target Column	car_model_count
Date Column	date_sold
Train/Test Split	0.85
Feature Columns	date_sold

Data Source Information:	
Field	Value
Data Source ID	22
Description	Fetch the Kia sales raw data from the external MySQL database for ML experiments
Internal ID	22

3.22 Check experiments log

Each and every experiment logs are maintained so that Data Scientist can review experiment logs whenever required for debugging.

Command:

ag experiments log

```
(AgentCORE_CLI) $ >ag experiments logs
Enter Project Name/ID[press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)
ID | Name | Status | Start | Finish | Description | Users | User Count | Project Type | Is Archived
31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [REDACTED]@coreops.ai | 1 | Timeseries | False
Selected Project ID: 31
Total 3 Experiments found in selected project
Enter Experiment Group Code/Version[press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Experiments > A139(1.0)
Selected Experiment: A139 (Version: 1.0)
Selected Experiment Details:
Selected Experiment (Total: 1)
Experiment Group Code | Version | Data Version | Data Source | Instance ID | Model | Executed By | Created At | Status
A139 | 1.0 | 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37 | - | [REDACTED]@coreops.ai | 2025-07-23 12:05:22 | pipeline_completed
Starting live log monitoring for Project 31, Group A139, Version: 1.0
Press Ctrl+C to stop...
2025-07-23 12:05:22 [INFO] CreateNewExperiment: ExperimentConfiguration snapshot saved for Run ID=139
2025-07-23 12:05:22 [INFO] CreateNewExperiment: Launching remote execution thread for Run ID=139
2025-07-23 12:05:22 [INFO] CreateNewExperiment: New experiment created. Run ID=139, Group=A139
2025-07-23 12:05:22 [INFO] CreateNewExperiment: Experiment request completed in 0.07758 seconds
2025-07-23 12:05:22 [INFO] ExperimentRemoteMachineRunner: Run status updated to: initiating session
2025-07-23 12:05:22 [INFO] ExperimentRemoteMachineRunner: Attempting SSH connection to 35.154.129.27:22 as ubuntu
2025-07-23 12:05:23 [INFO] ExperimentRemoteMachineRunner: Run status updated to: preflight_check
2025-07-23 12:05:23 [DEBUG] ExperimentRemoteMachineRunner: Executing command: python3.12 --version
2025-07-23 12:05:23 [INFO] ExperimentRemoteMachineRunner: Command output: Python 3.12.11
2025-07-23 12:05:23 [INFO] experiments.experiment.views.remote_runner.TabularData: Python 3.12 found: Python 3.12.11
2025-07-23 12:05:23 [INFO] experiments.experiment.views.remote_runner.TabularData: Python 3.12 is already installed.
2025-07-23 12:05:23 [INFO] ExperimentRemoteMachineRunner: Run status updated to: preparing_folders
2025-07-23 12:05:23 [DEBUG] ExperimentRemoteMachineRunner: Executing command: mkdir -p /home/ubuntu/A139/1.0
2025-07-23 12:05:23 [DEBUG] ExperimentRemoteMachineRunner: Command output:
```

3.23 Check experiment metrics

All the metrics are saved for each experiment. To access specific experiments user can type.

Command

ag experiments metrics

```
AgentCORE_CLI $ ag experiments metrics
(AgentCORE_CLI) $ >ag experiments metrics
Enter Project Name/ID/press Tab for suggestions and Press Enter for Selection:
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                      | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|----------------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | tarun.upadhyaya@coreops.ai | 1          | Timeseries   | False       |


Selected Project ID: 31 (Type ID: 7)
Fetching metrics for project 31...
Experiments with Available Metrics (2 found):
Total 2 Experiments found in selected project
Enter Experiment Group Code/Version/press Tab for suggestions and Press Enter for Selection:
Type partial name and press Tab for suggestions.
Experiments > A139(1.0)
Selected Experiment: A139 (Version: 1.0)
Selected Experiment Details:
Selected Experiment (Total: 1)


| Experiment Group Code | Version | Data Version | Data Source                                                                      | Instance ID | Model | Executed By                | Created At          | Status             |
|-----------------------|---------|--------------|----------------------------------------------------------------------------------|-------------|-------|----------------------------|---------------------|--------------------|
| A139                  | 1.0     | 76           | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37          | -     | tarun.upadhyaya@coreops.ai | 2025-07-23 12:05:22 | pipeline_completed |


Metrics for Experiment A139 (Run ID: N/A)
Experiment Information


| Field           | Value                                                                            |
|-----------------|----------------------------------------------------------------------------------|
| Experiment Code | A139                                                                             |
| Run ID          | N/A                                                                              |
| Version         | 1.0                                                                              |
| Data Version    | 76                                                                               |
| Data Source     | Fetch the Kia sales raw data from the external MySQL database for ML experiments |


Core Performance Metrics:


| Metric             | Value        |
|--------------------|--------------|
| R2                 | -0.101680    |
| MAE                | 45.822129    |
| MSE                | 4,210.807091 |
| RMSE               | 64.890732    |
| MAPE               | 0.690352     |
| MEDAE              | 30.192725    |
| EXPLAINED_VARIANCE | -0.035443    |
| MSLE               | 0.361411     |
| SMAPE              | 0.309008     |


Additional Metrics:


| Metric               | Value        |
|----------------------|--------------|
| DIRECTIONAL_ACCURACY | 0.471698     |
| MPE                  | -0.539632    |
| MFE                  | 24.557510    |
| MASE                 | 0.711059     |
| AIC                  | 3,347.800000 |
| BIC                  | 3,374.180000 |


Rolling Mae W5:


| Statistic | Value     |
|-----------|-----------|
| Count     | 103       |
| Average   | 45.706557 |
| Minimum   | 8.876016  |
| Maximum   | 64.800176 |
| Median    | 46.826800 |


Would you like to see all 103 values? [y/n] (n): n
Rolling Mse W5:


| Statistic | Value       |
|-----------|-------------|
| Count     | 103         |
| Average   | 4248.050893 |
| Minimum   | 103.000000  |
| Maximum   | 7934.278272 |
| Median    | 4157.340038 |

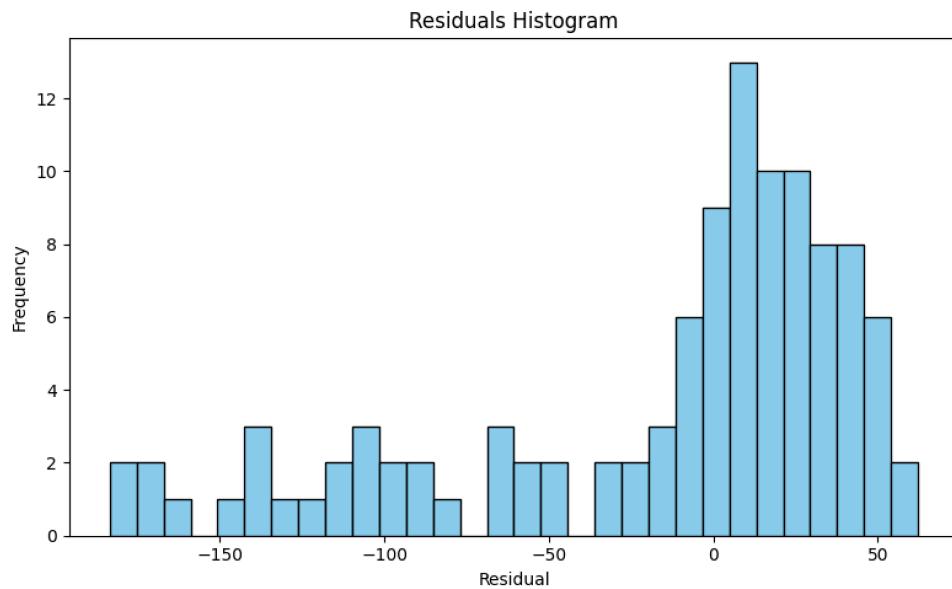

Would you like to see all 103 values? [y/n] (n): n
Would you like to save these metrics to a JSON file? [y/n] (n): n
(AgentCORE_CLI) $ >
```

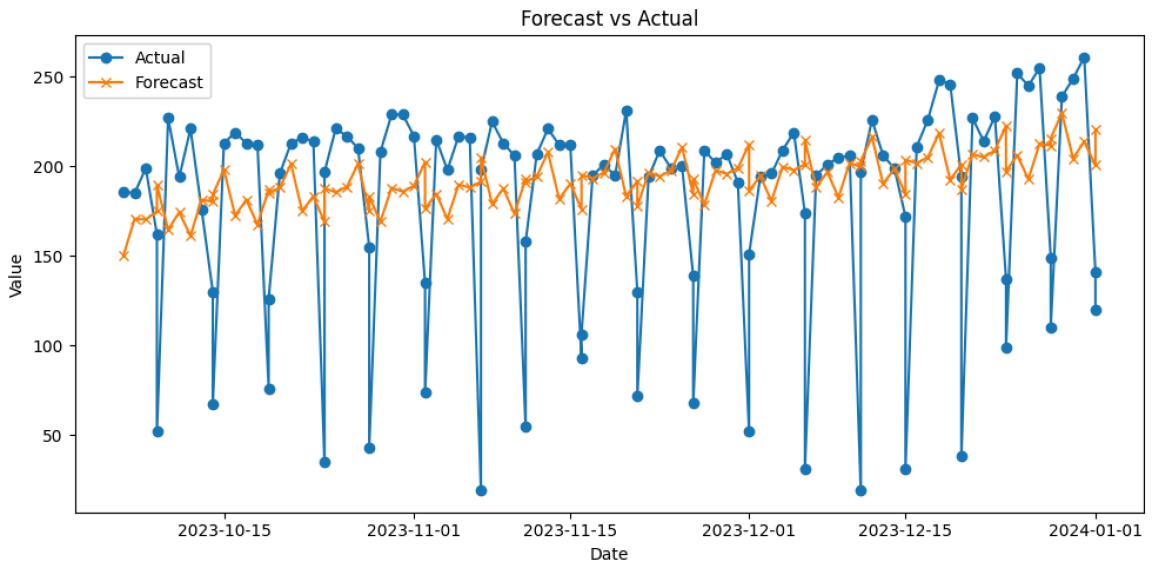
3.24 Check plots generated for the experiment

Command:

ag experiments plots

```
(AgentCORE_CLI) $ >ag experiments plots
Enter Project Name/ID (press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)
+---+----+-----+-----+-----+-----+-----+-----+-----+-----+
| ID | Name | Status | Start | Finish | Description | Users | User Count | Project Type | Is Archived |
+---+----+-----+-----+-----+-----+-----+-----+-----+-----+
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | tarun.upadhyaya@coreops.ai | 1 | Timeseries | False |
+---+----+-----+-----+-----+-----+-----+-----+-----+-----+
Selected Project ID: 31 (Type ID: 7)
Fetching experiments with plots for project 31...
Experiments with Available Plots (2 found):
Total 2 Experiments found in selected project
Enter Experiment Group Code/Version (press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Experiments > A139(1.0)
Selected Experiment: A139 (Version: 1.0)
Selected Experiment Details:
Selected Experiment (Total: 1)
+---+-----+-----+-----+-----+-----+-----+-----+-----+
| Experiment Group Code | Version | Data Version | Data Source | Instance ID | Model | Executed By | Created At | Status |
+---+-----+-----+-----+-----+-----+-----+-----+-----+
| A139 | 1.0 | 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37 | - | tarun.upadhyaya@coreops.ai | 2025-07-23 12:05:22 | pipeline_completed |
+---+-----+-----+-----+-----+-----+-----+-----+-----+
Available Plots for Experiment A139 (3 plots):
Select a Plot to View
+---+-----+-----+
| Index | Plot Type | Status |
+---+-----+-----+
| 1 | plot | ✓ Available |
| 2 | plot | ✓ Available |
| 3 | plot | ✓ Available |
+---+-----+-----+
Select plot to view (1-3), 'a' for all plots, or 'q' to quit (1): 1
Plot 1: plot for Experiment A139
✓ Plot saved as: experiment_plots/exp_A139_plot_plot1_20250723_180609.png
Would you like to open the plot file? [y/n] (y): y
✓ Plot opened in default image viewer.
```





3.25 View details of all the experiments in a project

Command:

ag experiments view

```
(AgentCORE_CLI) $ >ag experiments view
Enter Project Name/[ID](press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)
-----[Redacted]-----
ID | Name | Status | Start | Finish | Description | Users | User Count | Project Type | Is Archived
31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | [Redacted]@coreops.ai | 1 | Timeseries | False
-----[Redacted]-----
Selected Project ID: 31 (Type ID: 7)
-----[Redacted]-----
Page 1 of 1 | Page Size: 10
Showing all 3 items
-----[Redacted]-----
Experiments (Total: 3)
-----[Redacted]-----
Experiment Group Code | Version | Data Version | Data Source | Instance ID | Model | Executed By | Created At | Status
A122 | 1.0 | 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37 | Prophet | [Redacted]@coreops.ai | 2025-07-23 11:28:32 | pipeline_completed
A139 | 1.0 | 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37 | Prophet | [Redacted]@coreops.ai | 2025-07-23 12:05:22 | pipeline_completed
A105 | 1.0 | 76 | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37 | Prophet | [Redacted]@coreops.ai | 2025-07-23 10:27:40 | failed
-----[Redacted]-----
```

3.26 Promote the experiment

User can identify the experiment for promoting to staging after comparing the metrics and plots of various experiments in the project.

Command:

ag experiments promote

```
(AgentCORE_CLI) $ >ag experiments promote
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                     | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|---------------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | tar [REDACTED] coreops.ai | 1          | Timeseries   | False       |


Total 3 Experiments found in selected project
Enter Experiment Group Code/Version(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Experiments > A139(1.0)
Selected Experiment: A139 (Version: 1.0)
Selected Experiment Details:
Selected Experiment (Total: 1)


| Experiment Group Code | Version | Data Version | Data Source                                                                      | Instance ID | Model | Executed By               | Created At          | Status             |
|-----------------------|---------|--------------|----------------------------------------------------------------------------------|-------------|-------|---------------------------|---------------------|--------------------|
| A139                  | 1.0     | 76           | Fetch the Kia sales raw data from the external MySQL database for ML experiments | 37          | -     | tar [REDACTED] coreops.ai | 2025-07-23 12:05:22 | pipeline_completed |


Select GitHub Credentials:
Enter Name/Credential Type Name(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Credentials > 20-GithubRepo(GitHub Credentials)
Selected Project Type: GitHubRepo (ID: GitHub Credentials)
Selected Credential Details:
Selected Credential (Total: 1)


| ID | Name       | Credential Type Name | Created At          |
|----|------------|----------------------|---------------------|
| 20 | GithubRepo | GitHub Credentials   | 2025-07-23 09:26:17 |


Pushing Experiment: A139 (Version: 1.0) to GIT
{
  "status": "success",
  "message": "GitHub push completed and branch verified.",
  "stdout": "",
  "stderr": ""
}
Github Push Successful
Message: GitHub push completed and branch verified.

Output:
None

# Promoting Experiment: A139 (Version: 1.0)
Experiment A139 version 1.0 successfully marked for promotion.
Details:
- Project ID: 31
- Experiment Name: SFExperiment2
- Executed By: tar [REDACTED] coreops.ai
- Target Column: car_model_count
- Train/Test Split: 0.75
- Started At: 2025-07-23T12:06:16.673297Z
- Completed At: None
- Created At: 2025-07-23T12:05:22.442435Z
```

3.27 Deploy the selected experiment to staging CLI

After running multiple experiments and finalizing the best one for production, there is one final step which is to perform end-to-end automated testing in the staging environment. The entire pipeline is automated and machine learning experiments are rerun with existing data source or with another similar data source that is close to production data. Upon successful model creation, automated model testing is triggered. Only if all automated test cases pass, model is then made available for production deployment.

Command:

ag deploy create

```
(AgentCORE_CLI) $ >ag deploy create
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)



| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                     | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|---------------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | tar@192.168.1.10:~/ops.ai | 1          | Timeseries   | False       |



Type partial name and press Tab for suggestions.
Select experiment group code > A139

Enter ID-Type(description)(press Tab for suggestions and Press Enter for Datasource Selection):
Type partial name and press Tab for suggestions.
Datasources > 22-MySQL(Fetch the Kia sales raw data from the external MySQL database for ML experiments)

Selected Datasource: 22-MySQL(Fetch the Kia sales raw data from the external MySQL database for ML experiments)
Selected Datasource Details:
Selected Project (Total: 1)



| ID | Source Type | Description                                                                      | Created By | Created At | Data Source Type | Project |
|----|-------------|----------------------------------------------------------------------------------|------------|------------|------------------|---------|
| 22 | MySQL       | Fetch the Kia sales raw data from the external MySQL database for ML experiments | -          | -          | 1                | -       |



Selected GitHub Credentials:

Enter Name/Credential Type Name(press Tab for suggestions and Press Enter for Selection):
Type partial name and press Tab for suggestions.
Credentials > 20-githubRepo(Github Credentials)

Selected Project Type: GitHubRepo (ID: GitHub Credentials)
Selected Credential Details:
Selected Credential (Total: 1)



| ID | Name       | Credential Type Name | Created At          |
|----|------------|----------------------|---------------------|
| 20 | GithubRepo | GitHub Credentials   | 2025-07-23 09:26:17 |


```

After providing all the required details, automated pipeline runs in background.

```
Experiment job started in the background.

Job ID: 84e7e3a2-6009-4a6b-bf79-97f909849a99

Do you want to track status? [yes/no] (yes): yes
Monitoring job status... Press Ctrl+C to stop

Job Steps


| Step                 | Status | Message                                                                 | Timestamp           |
|----------------------|--------|-------------------------------------------------------------------------|---------------------|
| SUBMITTED            | INFO   | Job received and prepared for processing.                               | 2025-07-23 14:42:42 |
| INITIALIZATION       | INFO   | Job started in a background thread.                                     | 2025-07-23 14:42:42 |
| SETUP                | INFO   | No previous successful job found. A full data pipeline run is required. | 2025-07-23 14:42:42 |
| SETUP                | INFO   | Fetching project and datasource details.                                | 2025-07-23 14:42:42 |
| SETUP                | INFO   | Project, datasource, and instance verified.                             | 2025-07-23 14:42:42 |
| FETCH_ARTIFACTS      | INFO   | Fetching experiment artifacts.                                          | 2025-07-23 14:42:42 |
| FETCH_ARTIFACTS      | INFO   | Artifacts fetched. Using data version_id: 76.                           | 2025-07-23 14:42:42 |
| FETCH_STEPS          | INFO   | Fetching data processing steps.                                         | 2025-07-23 14:42:43 |
| FETCH_STEPS          | INFO   | Data processing steps retrieved.                                        | 2025-07-23 14:42:43 |
| DATA_INGESTION (RAW) | INFO   | Starting raw data ingestion and processing.                             | 2025-07-23 14:42:43 |
| DATA_INGESTION (RAW) | INFO   | Completed. New version ID: 84                                           | 2025-07-23 14:42:47 |
| SAVE_VERSION_ID      | INFO   | No FEATURE stage. Saving last known version ID: 84                      | 2025-07-23 14:42:47 |
| RUN_EXPERIMENT       | INFO   | Preparing to run the final experiment.                                  | 2025-07-23 14:42:47 |
| RUN_EXPERIMENT       | INFO   | Synchronous experiment execution finished. Final status: requested      | 2025-07-23 14:43:53 |
| TESTING              | INFO   | Starting automated quality testing against thresholds.                  | 2025-07-23 14:43:53 |
| TESTING              | INFO   | Automated testing passed successfully.                                  | 2025-07-23 14:43:53 |
| COMPLETE             | INFO   | Job finished successfully.                                              | 2025-07-23 14:43:53 |



SUCCESS - Monitoring complete.

Result Message: Experiment pipeline completed successfully, and all quality tests passed.

Test Results Summary


| Metric               | Value                |
|----------------------|----------------------|
| r2                   | -0.13759988096215792 |
| mae                  | 46.29519909358658    |
| mse                  | 4348.100899126581    |
| rmse                 | 65.94013117310718    |
| mape                 | 0.7046274783702606   |
| medae                | 30.192973329641973   |
| explained_variance   | -0.07136519088933712 |
| msle                 | 0.36950809859259653  |
| smape                | 0.3104714273071449   |
| directional_accuracy | 0.4433962264150943   |
| mpe                  | -0.5253889412614667  |
| mfe                  | 24.393394862642197   |
| mase                 | 0.7198185141069994   |
| aic                  | 3347.8               |
| bic                  | 3374.18              |


```

3.28 View the deployment status in the Staging environment

After deployment, user can view the experiment results.

Command

ag deploy view

```
(AgentCORE_CLI) $ >ag deploy view
Enter Project Name/ID (press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                 | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|-----------------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | ██████████@coreops.ai | 1          | Timeseries   | False       |


Project Deployments:
Project Deployments (Total: 1)


| ID                                   | Deploy Experiment RunID | Experiment RunID | User                  | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|-----------------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | ██████████@coreops.ai | False          | SUCCESS |


Do you want to view particular deployment details? [yes/no] (yes): yes
Enter Deployment ID (press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available deployment: 84e7e3a2-6009-4a6b-bf79-97f909849a99
Selected Deployment:
Selected Deployment (Total: 1)


| ID                                   | Deploy Experiment RunID | Experiment RunID | User                  | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|-----------------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | ██████████@coreops.ai | False          | SUCCESS |


```

Deployment Details:				
Deployment Details (Total: 17)				
Step	Status	Message	Timestamp	
SUBMITTED	INFO	Job received and prepared for processing.	2025-07-23 14:42:42	
INITIALIZATION	INFO	Job started in a background thread.	2025-07-23 14:42:42	
SETUP	INFO	No previous successful job found. A full data pipeline run is required.	2025-07-23 14:42:42	
SETUP	INFO	Fetching project and datasource details.	2025-07-23 14:42:42	
SETUP	INFO	Project, datasource, and instance verified.	2025-07-23 14:42:42	
FETCH_ARTIFACTS	INFO	Fetching experiment artifacts.	2025-07-23 14:42:42	
FETCH_ARTIFACTS	INFO	Artifacts fetched. Using data version_id: 76.	2025-07-23 14:42:42	
FETCH_STEPS	INFO	Fetching data processing steps.	2025-07-23 14:42:43	
FETCH_STEPS	INFO	Data processing steps retrieved.	2025-07-23 14:42:43	
DATA_INGESTION (RAW)	INFO	Starting raw data ingestion and processing.	2025-07-23 14:42:43	
DATA_INGESTION (RAW)	INFO	Completed. New version ID: 84	2025-07-23 14:42:47	
SAVE_VERSION_ID	INFO	No FEATURE stage. Saving last known version ID: 84	2025-07-23 14:42:47	
RUN_EXPERIMENT	INFO	Preparing to run the final experiment.	2025-07-23 14:42:47	
RUN_EXPERIMENT	INFO	Synchronous experiment execution finished. Final status: requested	2025-07-23 14:43:53	
TESTING	INFO	Starting automated quality testing against thresholds.	2025-07-23 14:43:53	
TESTING	INFO	Automated testing passed successfully.	2025-07-23 14:43:53	
COMPLETE	INFO	Job finished successfully.	2025-07-23 14:43:53	

3.29 Override the deployment status

In the previous deployment the model did not pass the test criteria and hence model cannot be deployed to production. However, if user believe that model is good for production deployment then they can manually override and allow the model for production deployment.

Command

ag deploy override

```
(AgentCORE_CLI) $ >ag deploy override
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)



| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users        | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|--------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | t@coreops.ai | 1          | Timeseries   | False       |



Project Deployments:
Project Deployments (Total: 1)



| ID                                   | Deploy Experiment RunID | Experiment RunID | User         | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|--------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | t@coreops.ai | False          | SUCCESS |



Enter Deployment ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available deployment: 84e7e3a2-6009-4a6b-bf79-97f909849a99
Selected Deployment:
Selected Deployment (Total: 1)



| ID                                   | Deploy Experiment RunID | Experiment RunID | User         | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|--------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | t@coreops.ai | False          | SUCCESS |



Test updated successfully.
Updated deployment (Total: 1)



| ID                                   | Deploy Experiment RunID | Experiment RunID | User         | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|--------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | t@coreops.ai | True           | SUCCESS |


```

3.30 Deploy the Fast API to production to serve the model

Once the model is ready, run the below command to deploy model as a service to production server. A docker file is created and deployed to production server.

Command

ag deploy production

```
(AgentCORE_CLI) $ >ag deploy production
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(31)
Selected Project: Sales Forecasting (ID: 31)
Selected Project Details:
Selected Project (Total: 1)



| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users        | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|--------------|------------|--------------|-------------|
| 31 | Sales Forecasting | planned | 2025-07-23 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | t@coreops.ai | 1          | Timeseries   | False       |



Instances of Project:Sales Forecasting
Project Instance (Total: 1)



| ID | Name                             | Stage | State   | Instance Type | IP Address    | Created At     | Updated At  | Destroyed At | Running Since |
|----|----------------------------------|-------|---------|---------------|---------------|----------------|-------------|--------------|---------------|
| 37 | sfinstance-dev-sales-forecasting | DEV   | RUNNING | t2.micro      | 35.154.129.27 | 23rd July 2025 | 04h 58m ago | None         | 04h 58m       |



Enter Instance Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available instance: 37-sfinstance-dev-sales-forecasting(RUNNING)
Selected Instance:
Selected Instance Details:
Selected Project (Total: 1)



| ID | Name                             | Stage | State   | Instance Type | IP Address    | Created At     | Updated At  | Destroyed At | Running Since |
|----|----------------------------------|-------|---------|---------------|---------------|----------------|-------------|--------------|---------------|
| 37 | sfinstance-dev-sales-forecasting | DEV   | RUNNING | t2.micro      | 35.154.129.27 | 23rd July 2025 | 04h 58m ago | None         | 04h 58m       |



Project Deployments:
Project Deployments (Total: 1)



| ID                                   | Deploy Experiment RunID | Experiment RunID | User         | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|--------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | t@coreops.ai | True           | SUCCESS |



Enter Deployment ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available deployment: 84e7e3a2-6009-4a6b-bf79-97f909849a99
Selected Deployment:
Selected Deployment (Total: 1)



| ID                                   | Deploy Experiment RunID | Experiment RunID | User         | Is Test Passed | Status  |
|--------------------------------------|-------------------------|------------------|--------------|----------------|---------|
| 84e7e3a2-6009-4a6b-bf79-97f909849a99 | 44                      | 139              | t@coreops.ai | True           | SUCCESS |


```

After providing all the details, it gets the confirmation from user to start the deployment of model service to production.

```

Do you want to deploy to production? [yes/no] (yes): yes
✓ Promotion initiated successfully!
>ID Promotion ID: d453267e-1b70-4123-be96-9734a5b807f3
Message: Promotion initiated.

Do you want to track status? [yes/no] (yes): yes
Monitoring job status... Press Ctrl+C to stop

      Task Status Summary

```

Field	Value
Task ID	d453267e-1b70-4123-be96-9734a5b807f3
Project	Sales Forecasting
Status	SUCCESS
Promoted by	[REDACTED]@coreops.ai
Promoted At	2025-07-23 15:42:26
API Endpoint	http://35.154.129.27:8000

Task ended with status: SUCCESS

Once the FastAPI service is deployed to production server, on the CLI screen user will get the working API Endpoints.

Type in the <http://13.204.63.127:8000/> on browser

Model Type: Timeseries

IP Address: 13.204.63.127

- **GET /health** - Check the health status of the model instance.

http://13.204.63.127:8000/health

```
{
  "status": "healthy",
  "uptime_seconds": 1123.919,
  "timestamp": "2025-07-22T01:38:26.394848"
}
```

- **POST /predict** - Send input features to receive prediction results.

http://13.204.63.127:8000/predict

Payload:

```
{
  "features": {
    "start": "2023-01-01",
    "end": "2023-01-10"
  }
}
```

Response:

```
{
  "prediction": [...],
  "request_id": "1751704028614",
  "processing_time": 0.0,
  "timestamp": "2025-07-05T13:57:08.622800"
```

}

3.31 To view model performance on production server

After model is deployed to production, user can monitor both operational and performance metrices of the deployed services.

Command:

ag observability metrics

```
(agentcore) (base) Tarun-MacBook-Pro:agentcore-cli tarunupadhyay$ ag observability metrics
Enter Project Name/ID(press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(11)
Selected Project: Sales Forecasting (ID: 11)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                     | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|---------------------------|------------|--------------|-------------|
| 11 | Sales Forecasting | planned | 2025-07-24 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | agentcore_user@coreops... | 1          | Timeseries   | False       |


Selected Project ID: 11 (Type ID: 7)
api/models-hub-prod/11/
Available Deployments:


| Short ID    | Status  | Promoted By               | Promoted At         | API Endpoint              |
|-------------|---------|---------------------------|---------------------|---------------------------|
| 9b86c755... | SUCCESS | agentcore_user@coreops.ai | 2025-07-24 07:21:34 | http://13.204.63.127:8000 |


Select a deployment (you can type partial ID or use tab completion):
Type partial name and press Tab for suggestions.
Select deployment > 9b86c755... - SUCCESS - by agentcore_user@coreops.ai - 2025-07-24 07:21:34
Selected Deployment: 9b86c755... (Experiment Run ID: 9b86c755-c125-4423-8c0f-826d664a1139)
 System Uptime: 2701.44636 hours
Metrics Overview for Deployment 9b86c755...
Metrics Summary


| Metric                 | Data Points | Latest Value | Average  | Min/Max             | Time Range                                 |
|------------------------|-------------|--------------|----------|---------------------|--------------------------------------------|
| Cpu Percent            | 539         | 10.0%        | 4.3%     | 0.0% / 29.9%        | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Memory Mb              | 539         | 176.3 MB     | 172.4 MB | 169.8 MB / 176.3 MB | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Uptime Hours           | 539         | 0.750s       | 0.375s   | 0.000s / 0.750s     | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Avg Latency Sec        | 539         | 0.022s       | 0.004s   | 0.000s / 0.022s     | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Avg Inference Time Sec | 539         | 0.064s       | 0.010s   | 0.000s / 0.064s     | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Inference Count        | 539         | 1            | 0        | 0 / 1               | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Total Requests         | 539         | 3            | 2        | 1 / 3               | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Throughput Rps         | 539         | 0            | 0        | 0 / 1               | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Active Requests        | 539         | 0            | 0        | 0 / 0               | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |
| Error Rate             | 539         | 0.0%         | 0.0%     | 0.0% / 0.0%         | 2025-07-24 07:24:05 to 2025-07-24 08:08:55 |


```

To monitor more details on any of the metrices, user gets option to select the metrics. Selecting CPU percent in this case

```

■ Available actions:
1. View detailed stats for a specific metric
2. Export all metrics to file
3. Exit

Select an option (1, 2, 3) [3]: 1
Select a metric to view in detail:
Type partial name or press Tab for suggestions.
Select metric > CPU Percent

■ Detailed View: CPU Percent Statistics


| Statistic         | Value |
|-------------------|-------|
| Total Data Points | 539   |
| Latest Value      | 10.0% |
| Avg               | 4.3%  |
| Minimum           | 0.0%  |
| Maximum           | 29.9% |



■ Recent Data Points (showing newest first):
=====
Page 1 of 54 | Page Size: 10
Showing all 539 items
=====

CPU Percent Data (Total: 539)


| timestamp           | value | promote_id  |
|---------------------|-------|-------------|
| 2025-07-24 08:08:55 | 10.0% | 9b86c755... |
| 2025-07-24 08:08:50 | 0.0%  | 9b86c755... |
| 2025-07-24 08:08:45 | 20.0% | 9b86c755... |
| 2025-07-24 08:08:40 | 0.0%  | 9b86c755... |
| 2025-07-24 08:08:35 | 0.0%  | 9b86c755... |
| 2025-07-24 08:08:30 | 20.0% | 9b86c755... |
| 2025-07-24 08:08:25 | 0.0%  | 9b86c755... |
| 2025-07-24 08:08:20 | 0.0%  | 9b86c755... |
| 2025-07-24 08:08:15 | 10.0% | 9b86c755... |
| 2025-07-24 08:08:10 | 0.0%  | 9b86c755... |


```

3.32 View all the models deployed on production server

Command:

ag observability view

```

(agentcore) (base) Tarun's-MacBook-Pro:agentcore-cli tarunupadhyaya$ ag observability view
Enter Project Name/ID (press Tab for suggestions and Press Enter for Selection):
Automatically selected the only available project: Sales Forecasting(11)

Selected Project: Sales Forecasting (ID: 11)
Selected Project Details:
Selected Project (Total: 1)


| ID | Name              | Status  | Start      | Finish     | Description                                                              | Users                    | User Count | Project Type | Is Archived |
|----|-------------------|---------|------------|------------|--------------------------------------------------------------------------|--------------------------|------------|--------------|-------------|
| 11 | Sales Forecasting | planned | 2025-07-24 | 2025-07-30 | Creating a project to build machine learning model to predict car sales. | agentcore_user@coreop... | 1          | Timeseries   | False       |



Selected Project ID: 11 (Type ID: 7)
api/models-hub-prod/11/
=====

Page 1 of 1 | Page Size: 10
Showing all 1 items
=====

Deployments (Total: 1)


| id                                   | status  | promoted_by               | promoted_at         | api_endpoint              |
|--------------------------------------|---------|---------------------------|---------------------|---------------------------|
| 9b86c755-c125-4423-8c0f-826d664a1139 | SUCCESS | agentcore_user@coreops.ai | 2025-07-24 07:21:34 | http://13.204.63.127:8000 |


```