PotPoint

#3

Introduction

An online data analysis platform

- PotPoint is an online platform dedicated to assisting restaurants with data analysis.
- By analyzing operational data and utilizing AI technology, PotPoint effectively transforms restaurant performance into easily readable and clear business reports.
- This helps restaurant managers promptly understand the operational status of their establishment and make informed business decisions.

Tech stack

Front end

React, Ant Design, ECharts,
Redux Toolkit

Back end

Node.js, Express.js, PostgreSQL,
Knex, Transformers.js, JWT

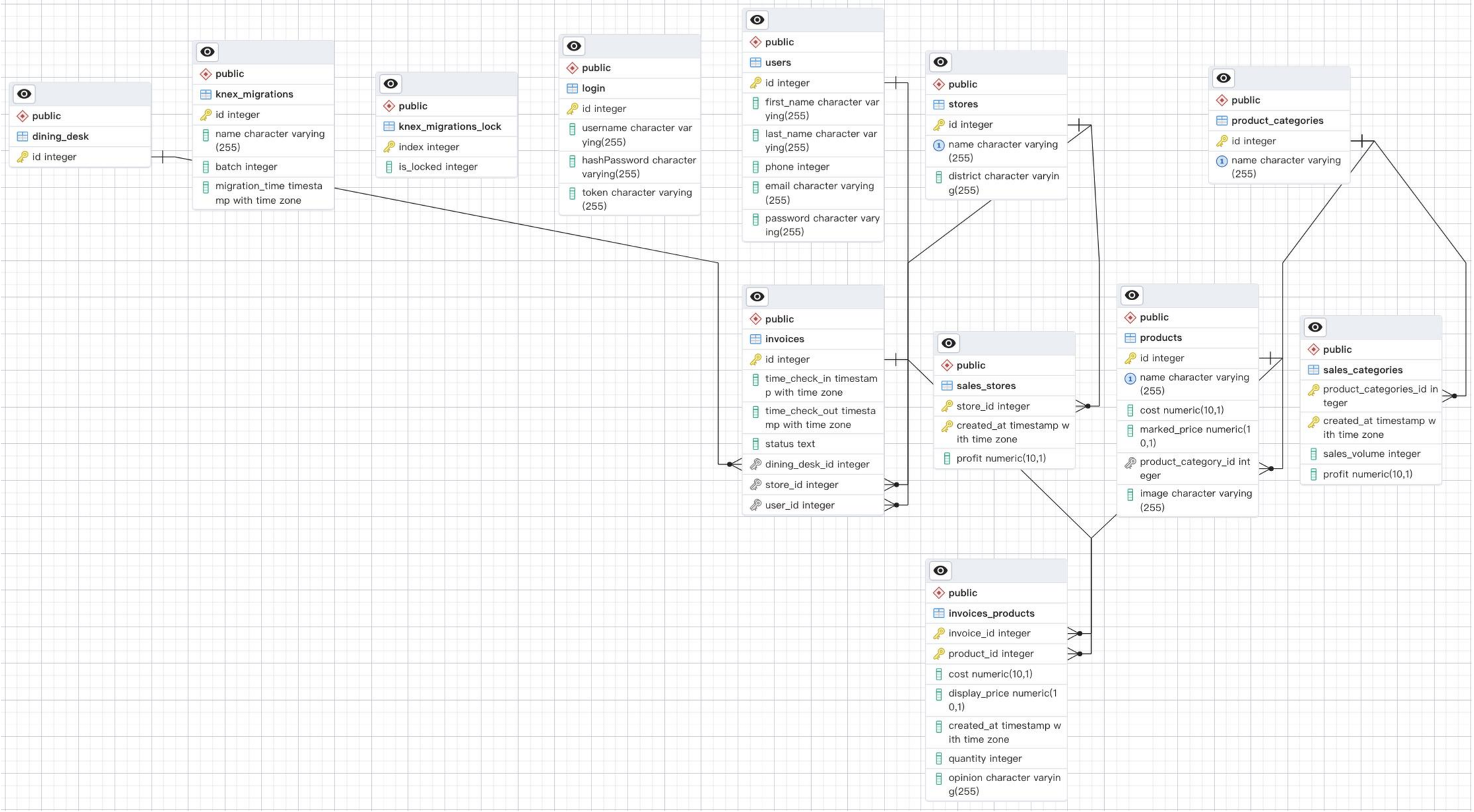
Ajax

Axios

DevOps

AWS (EC2, IAM), GitHub Actions

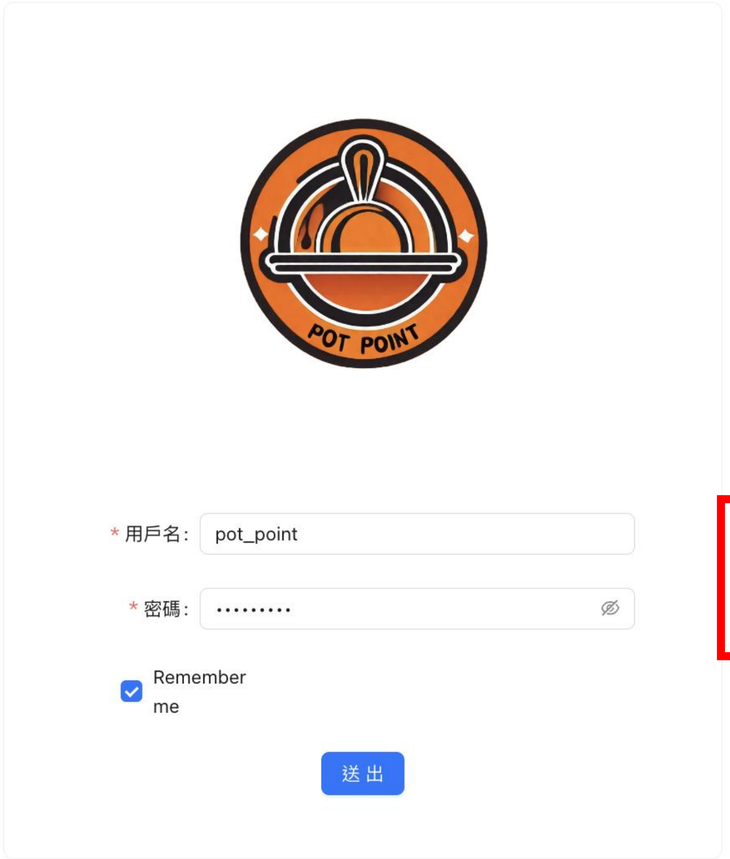
Entity Relationship Diagram (ERD)

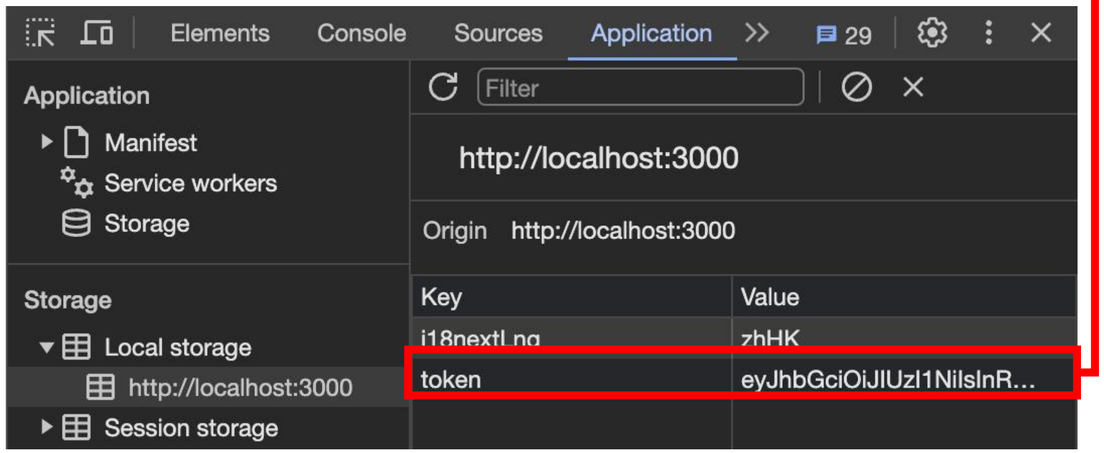


Login

JSON Web Token (JWT)

- Apply JWT for login.
- JWT is a secure and reliable method for transmitting information between web applications, widely used for purposes such as identity verification and authorization.
- After the initial login, the server would return a token, that would be stored in the browser's local storage for identification and automatic login in subsequent sessions.





The token for identification and automatic login

Dashboard – transaction records

Calculate the total revenue and profitability for different time periods, including: yearly, monthly, and daily

繁體中文 登出

近1年收入	近1年收益率
$22,254,856	26.36%
近1月收入	近1月收益率
$2,191,972	-14.78%
今日收入	今日收益率
$9,220	$-0.33

Customize time interval

訂單記錄 分店收入 類別收入 產品收入

Click to navigate to other tabs

近1年 請選擇月份

Click to navigate to transaction details

Record detailed information for each transaction

訂單ID	開始時間	結束時間	狀態	分店	桌號	收入
957	2023-01-01 00:18:19	2023-01-01 01:51:51	closed	Tsuen Wan	4	$3,489
244	2023-01-01 03:23:03	2023-01-01 05:53:07	closed	Yuen Long	26	$3,300.2
11	2023-01-01 06:05:56	2023-01-01 12:58:24	closed	Yuen Long	26	$4,703
871	2023-01-01 13:12:16	2023-01-01 14:17:47	closed	Tseung Kwan O	17	$4,074
1476	2023-01-01 16:06:29	2023-01-01 19:03:20	closed	Sheung Wan	9	$4,317.6
1749	2023-01-01 19:11:03	2023-01-01 21:13:27	closed	Tuen Mun	24	$2,232
764	2023-01-01 21:32:20	2023-01-01 23:13:37	closed	Tsuen Wan	4	$884.5
178	2023-01-02 00:06:16	2023-01-02 05:14:42	closed	Kowloon Bay	13	$3,857
1199	2023-01-02 05:45:50	2023-01-02 10:04:38	closed	Yuen Long	28	$1,746.9

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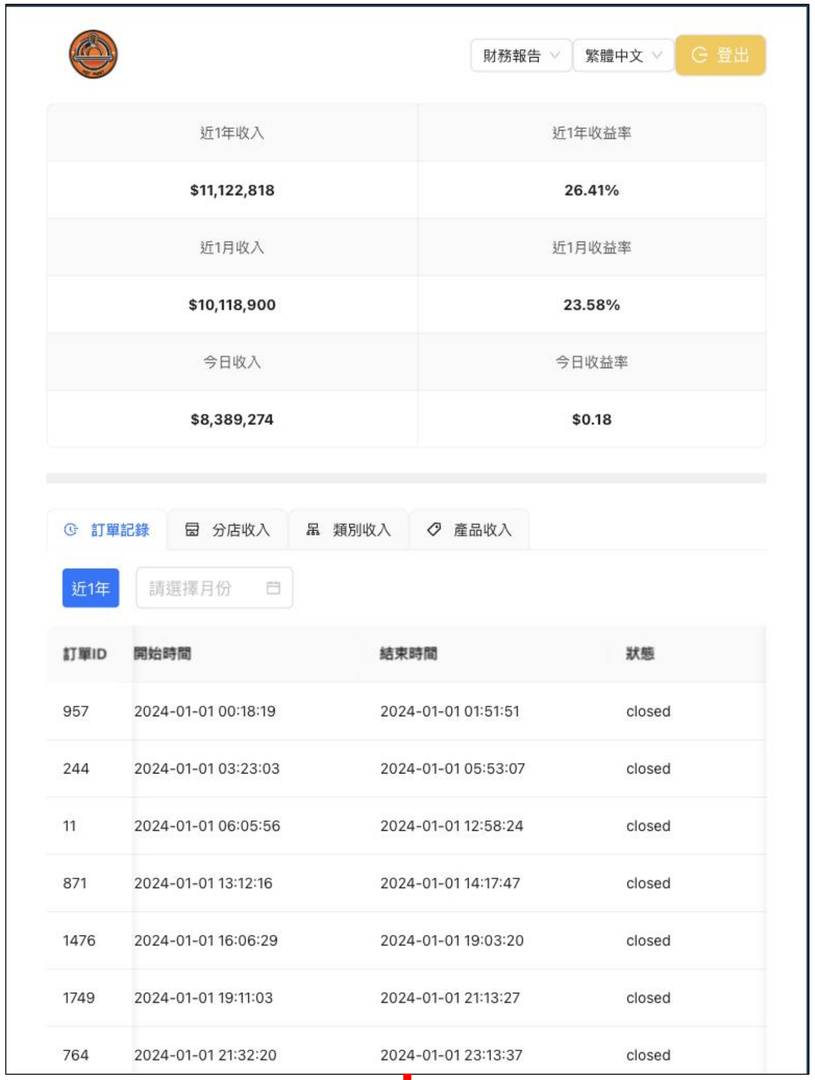
Dashboard - transaction records (RWD)



Mobile's view

Tablet's view

Transaction details

財務報告 | 繁體中文 | 登出

Click to show customer review of the product

Items ordered

訂單明細

	產品ID	名稱	售價	數量	總售價
+	24	Water spinach	$20	3	$61
+	7	Chicken leg meat	$108	4	$432
+	20	Cod fish slices	$128	10	$1,280
+	17	Beer	$24	10	$240
+	4	Pork Belly	$192	6	$1,152
−	2	Tri Tip	$135	1	$135
意見: 三角肉有啲硬而且乾燥。					
總收入					$3,300

Customer reivew

< 1 >

Transaction details (RWD)

訂單明細

	產品ID	名稱	售價	數量	總售價
−	2	Tri Tip	$135	5	$675
意見: 三角肉缺乏調味料,味道平淡。					
+	21	Sea bream slices	$135	5	$675
+	24	Water spinach	$20	10	$204
+	15	Glutinous rice cakes	$45	3	$135
+	1	Short rib	$180	10	$1,800
總收入					$3,489

1

Mobile’s view

財務報告 繁體中文 登出

訂單明細

	產品ID	名稱	售價	數量	總售價
+	2	Tri Tip	$135	5	$675
+	21	Sea bream slices	$135	5	$675
+	24	Water spinach	$20	10	$204
+	15	Glutinous rice cakes	$45	3	$135
+	1	Short rib	$180	10	$1,800
總收入					$3,489

1

Tablet’s view

Dashboard - branch revenue

訂單記錄 | 分店收入 | 類別收入 | 產品收入

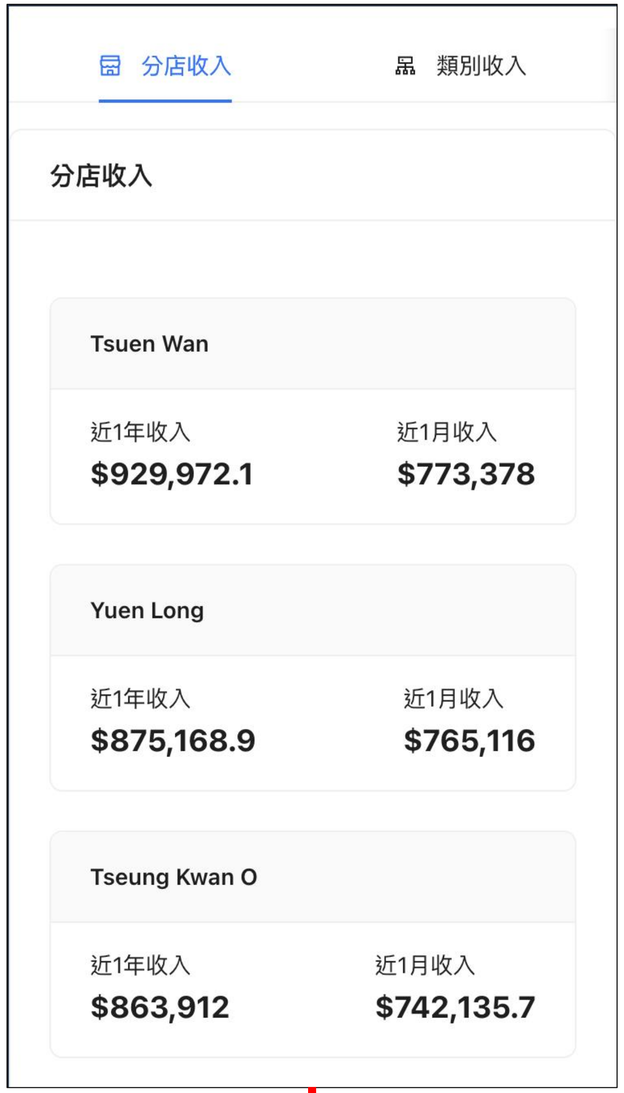
分店收入

	近1年收入	近1月收入
Tsuen Wan	$929,972.1	$34,896.6
Yuen Long	$875,168.9	$41,246.2
Tseung Kwan O	$863,912	$40,484.8
Sheung Wan	$1,013,610.7	$28,883.1
Tuen Mun	$985,278.3	$34,903.1
Kowloon Bay	$891,399.2	$28,750.7

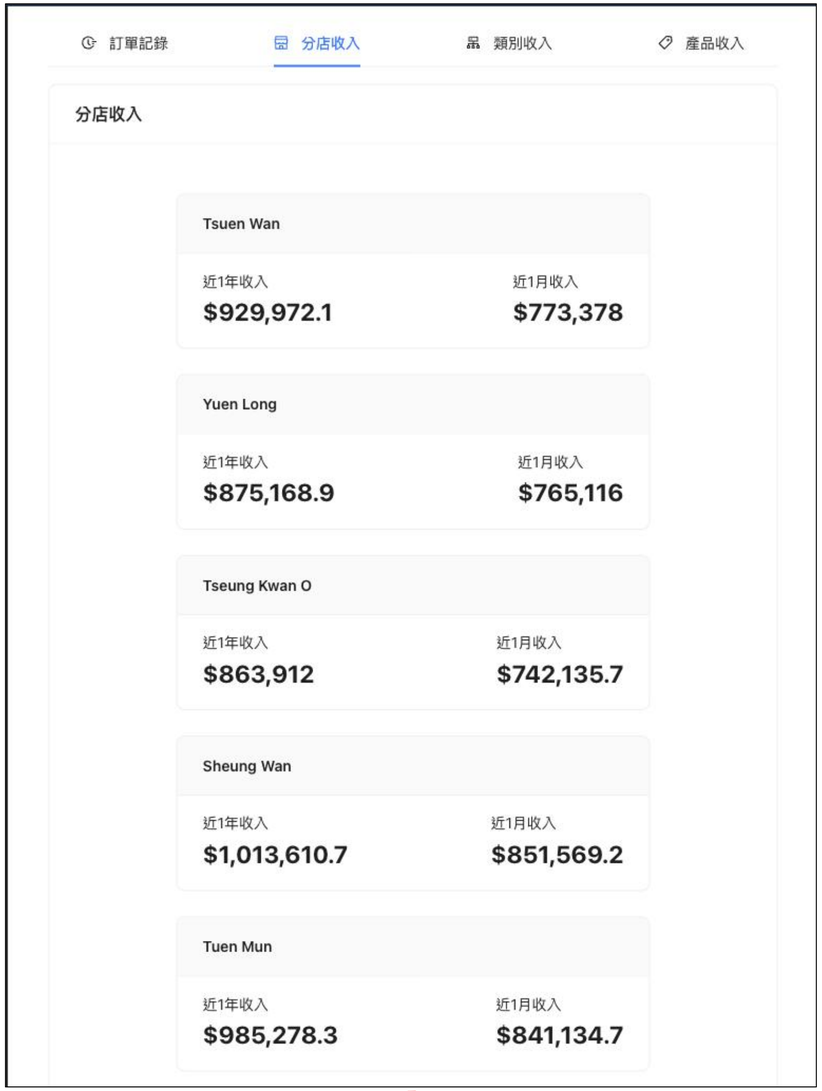
The revenue of each branch for the past year and the past month was recorded

Click to navigate to the business analysis of the branch

Dashboard - branch revenue (RWD)



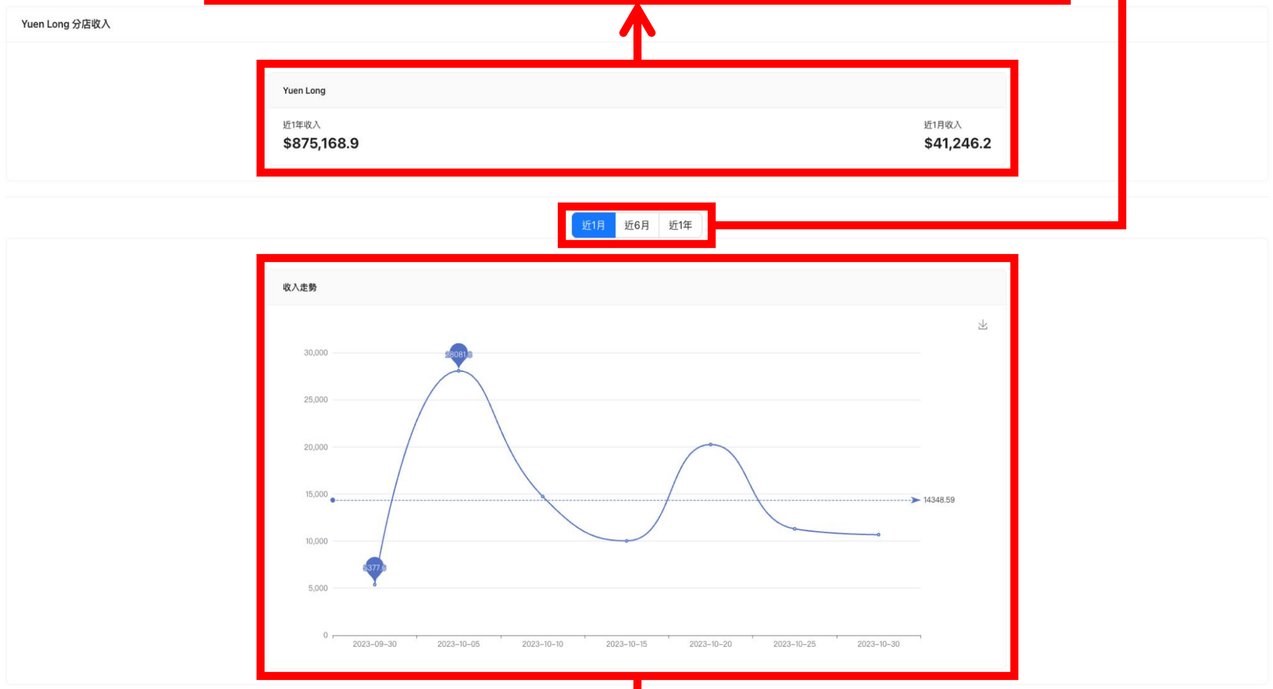
Mobile's view



Tablet's view

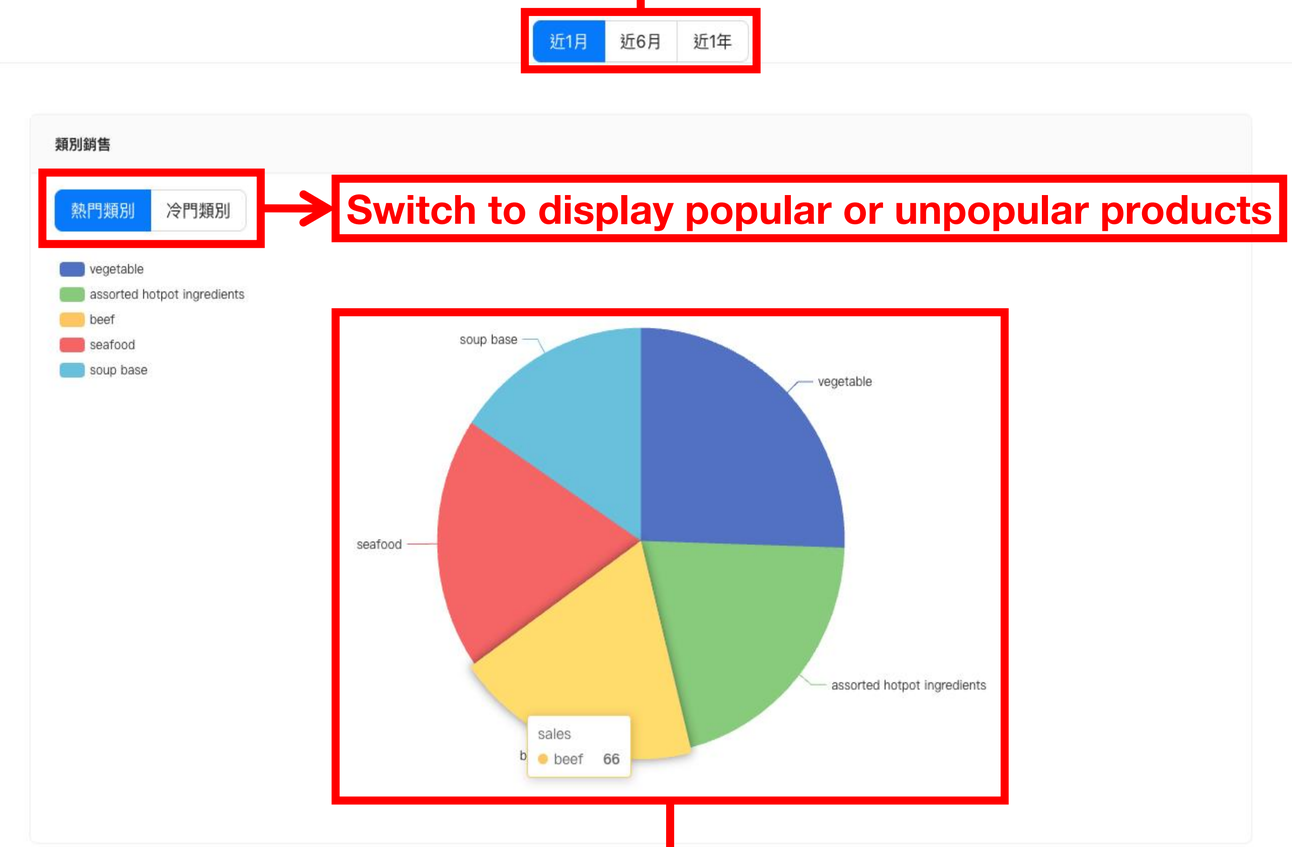
Business analysis of the branch

The revenue of the branch for the past year and the past month



Display the revenue changes for the specified period

Change the time intervals

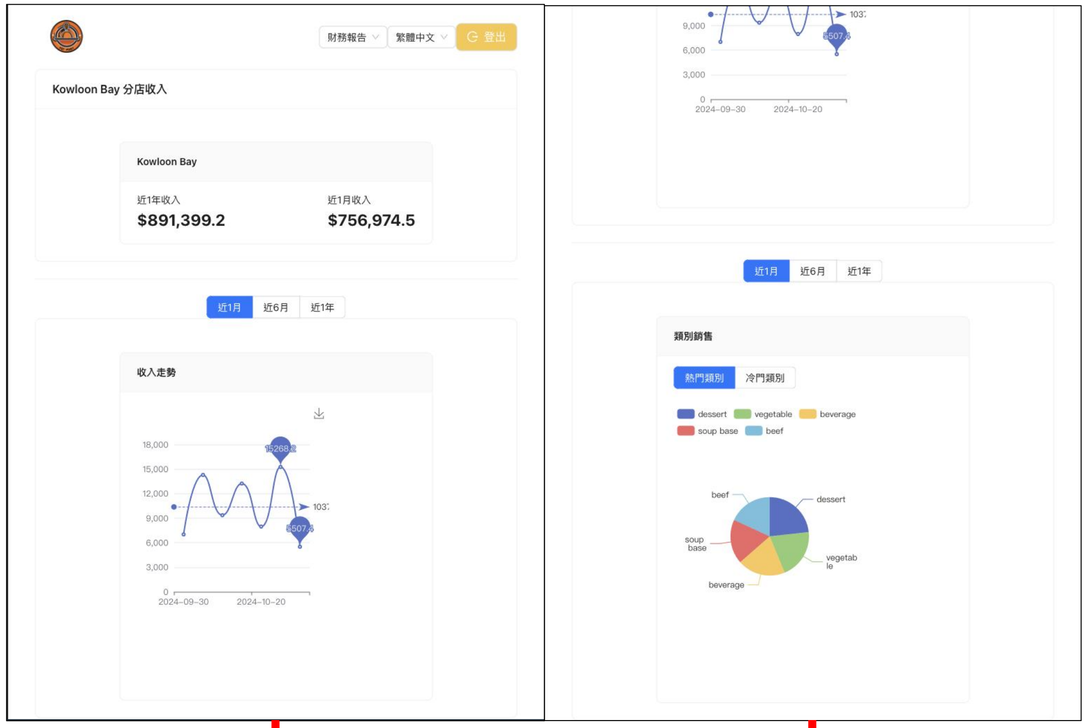


Switch to display popular or unpopular products

Display popular or unpopular products for the specified period

Business analysis of the branch (RWD)

Mobile's view



Tablet's view

Dashboard - product category revenue

The revenue of each product category for the past year and the past month was recorded

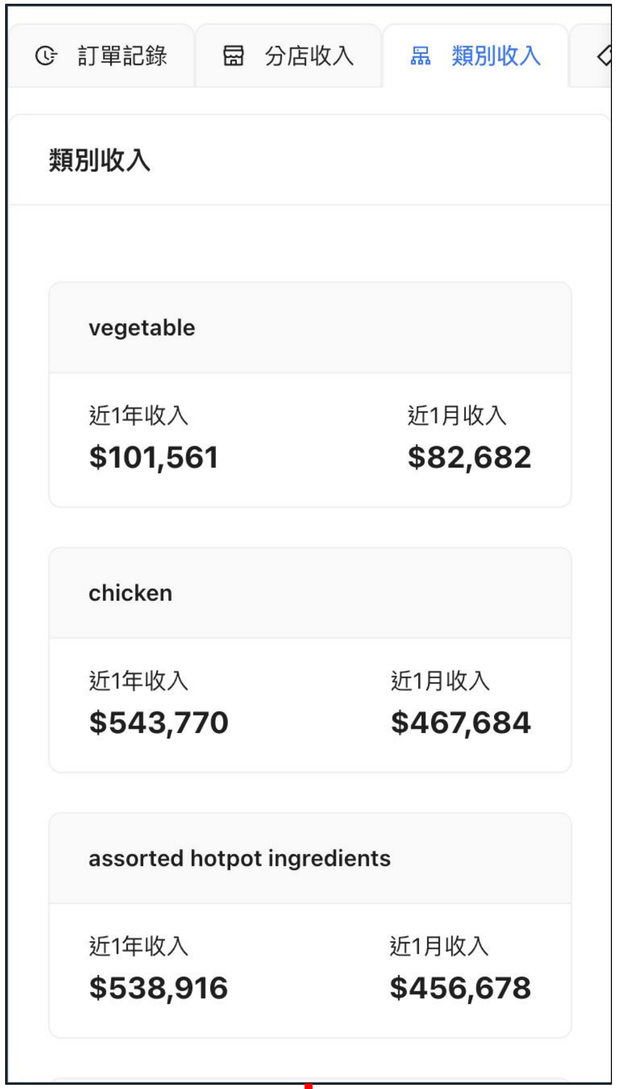
訂單記錄 | 分店收入 | 類別收入 | 產品收入

類別收入

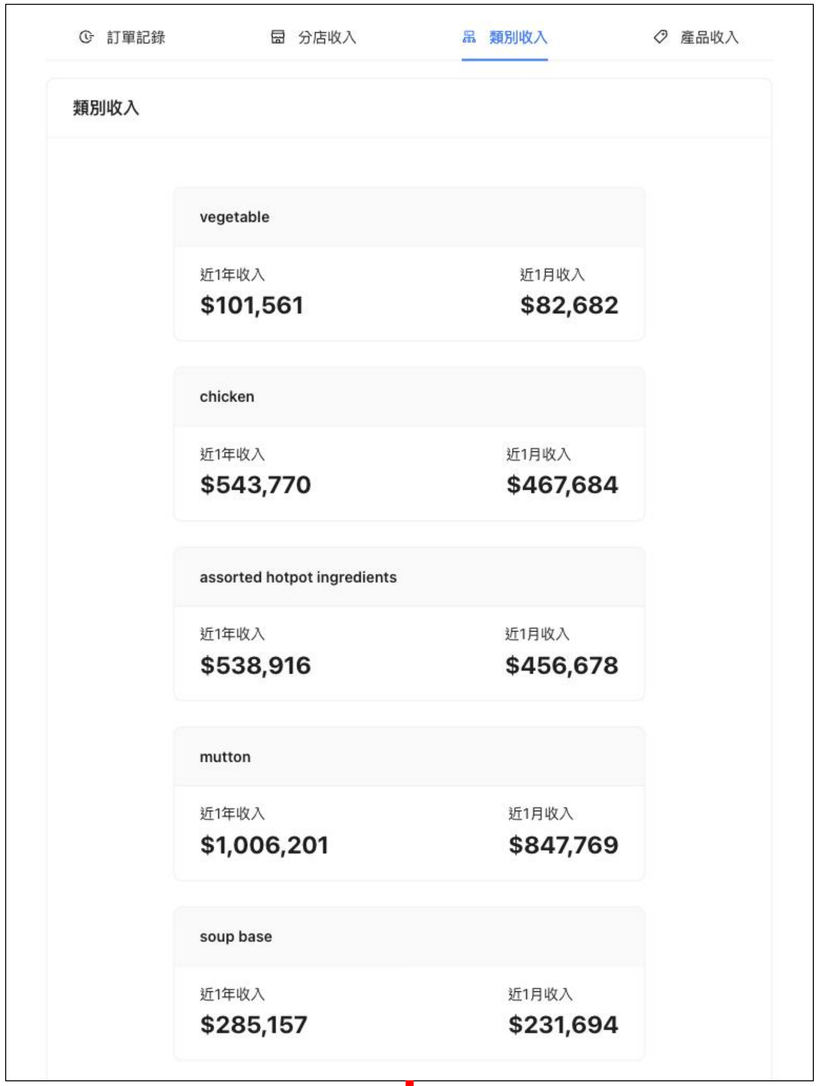
	近1年收入	近1月收入
vegetable	$101,561	$4,382
chicken	$543,770	$14,117
assorted hotpot ingredients	$538,916	$27,490
mutton	$1,006,201	$40,115
soup base	$285,157	$10,424
dessert	$295,982	$11,198

Click to navigate to the business analysis of the product category

Dashboard - product category revenue (RWD)

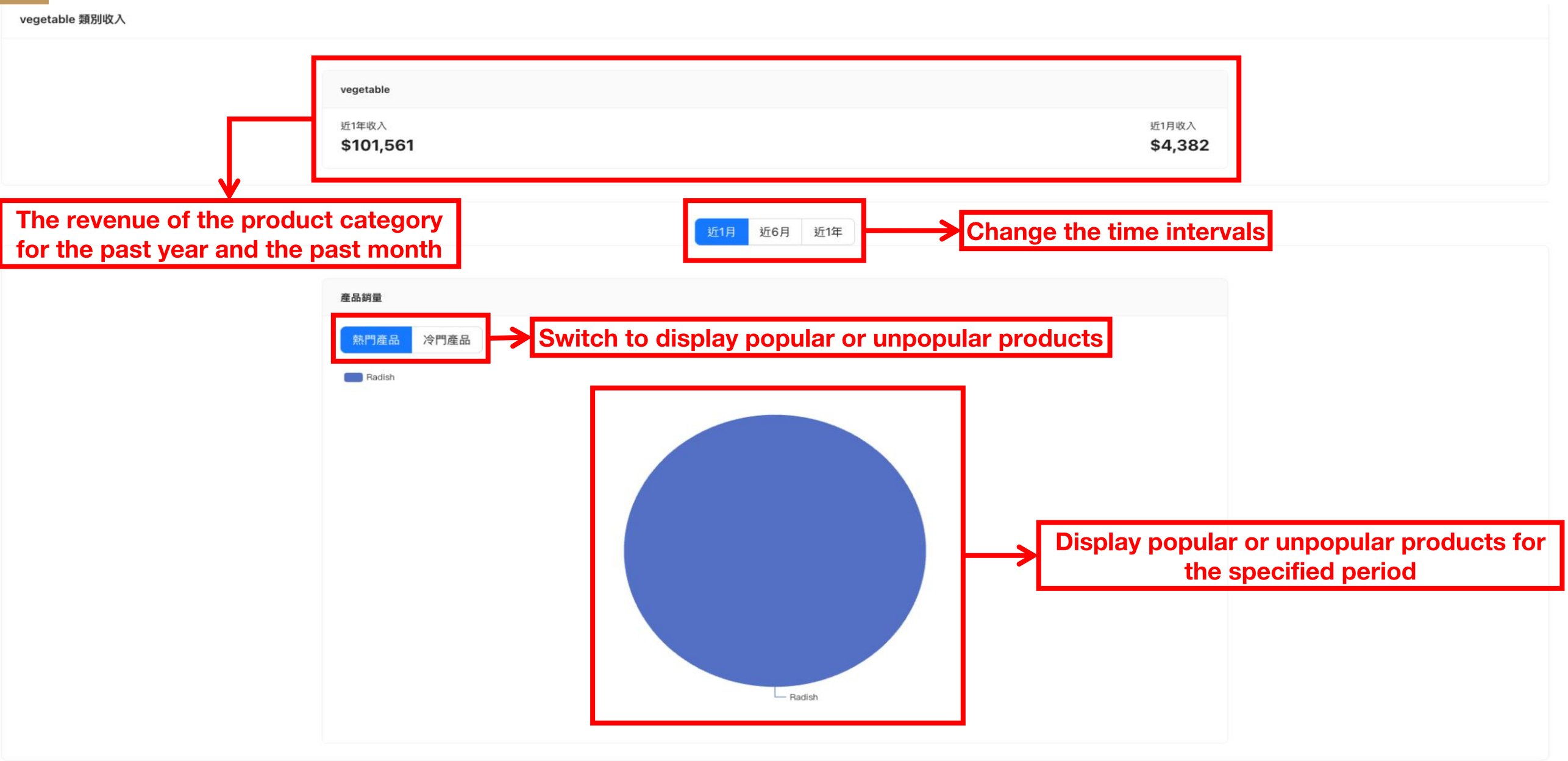


Mobile's view

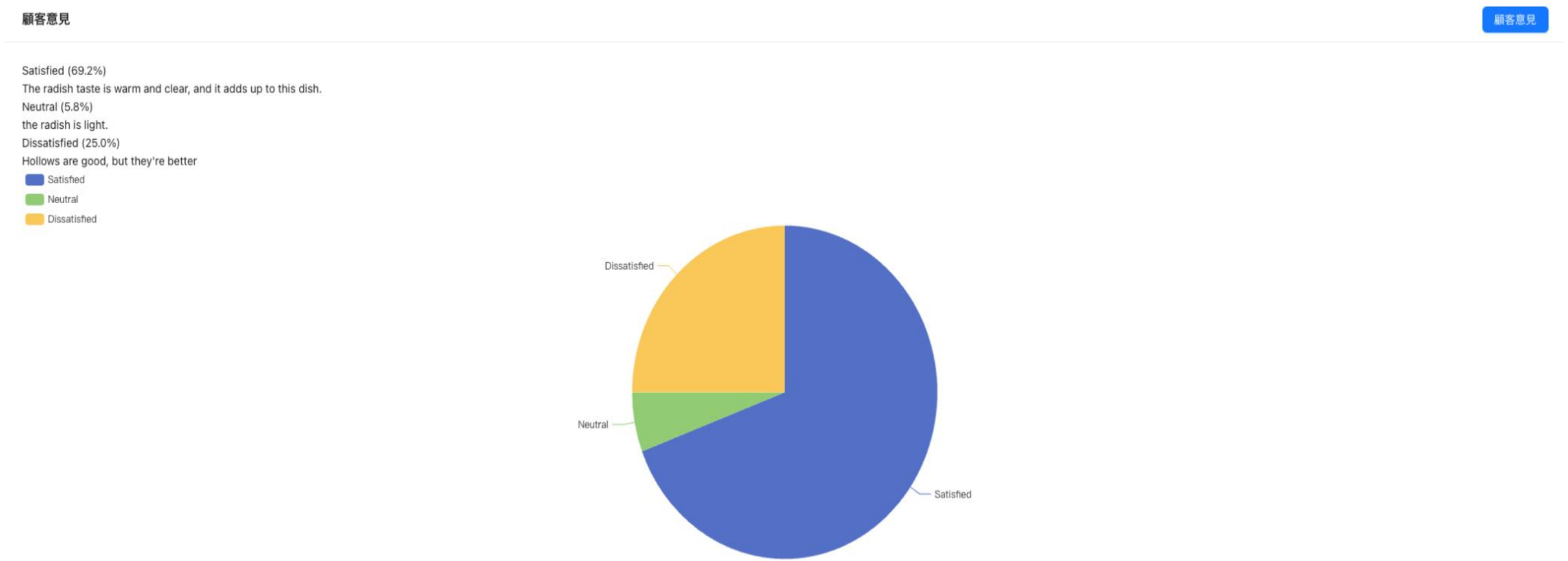


Tablet's view

Business analysis of the product category revenue

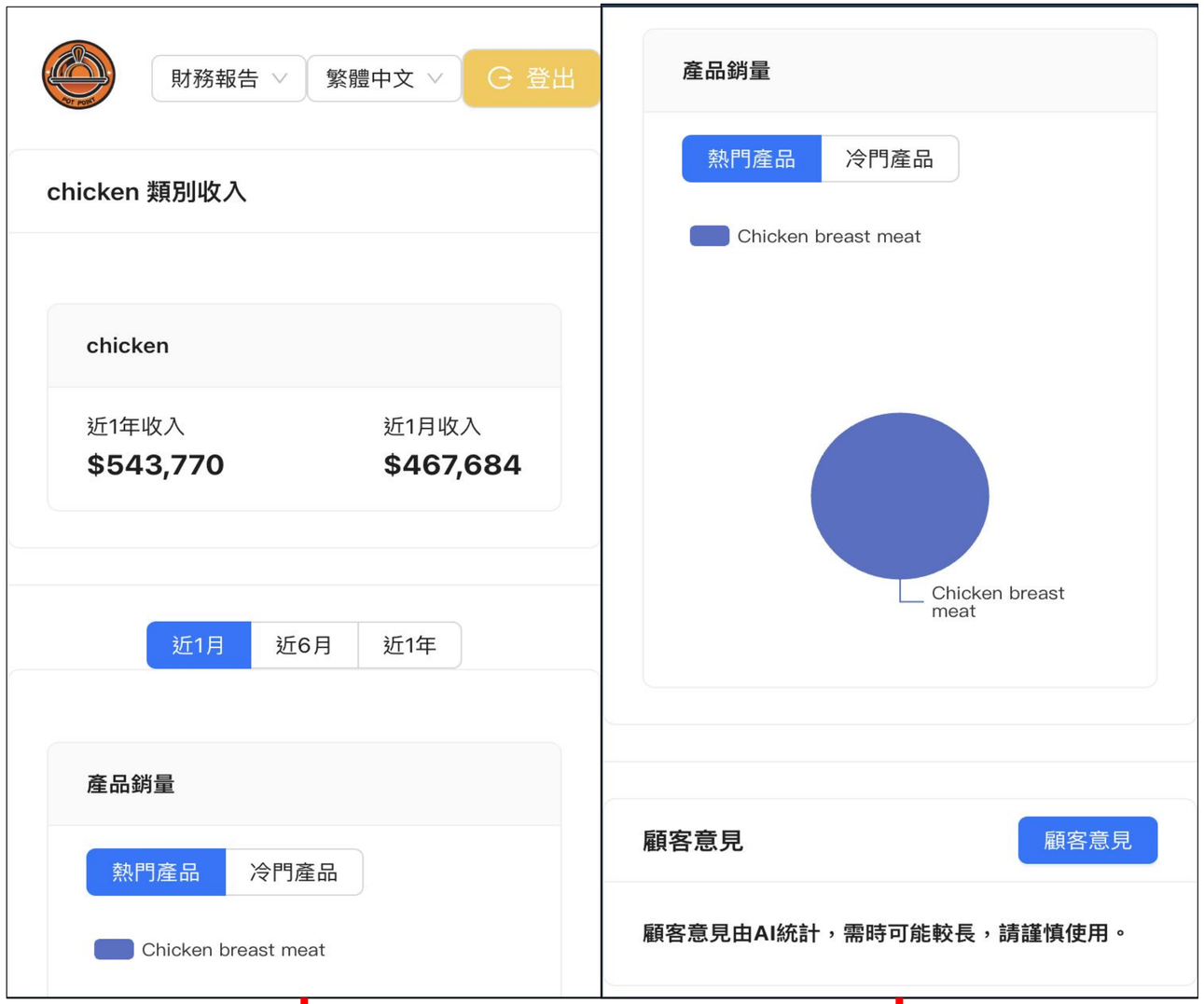


Business analysis of the product category revenue

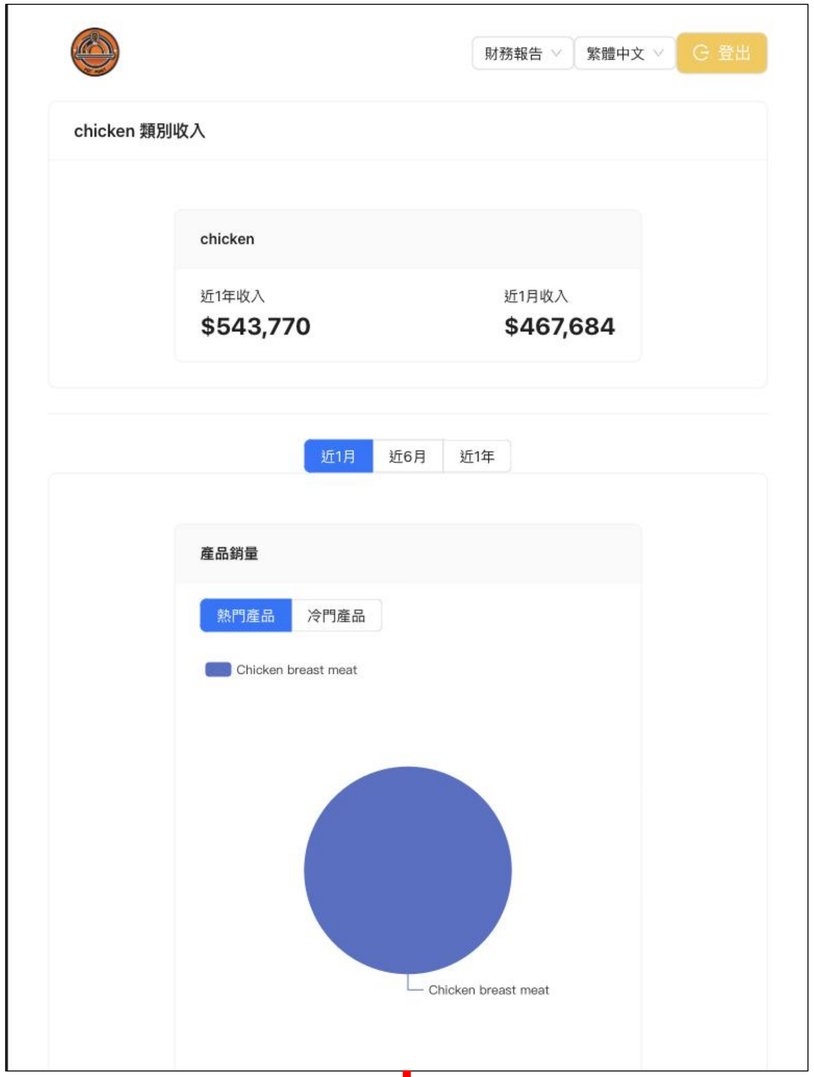


- **Perform sentiment analysis on customer reviews for different product categories using the pre-trained models Hugging Face's Transformers provided.**
- **Calculate the overall customer satisfaction level for the product category by determining the percentages of satisfied, neutral, and dissatisfied sentiments.**
- **Hugging Face's Transformers is an open-source natural language processing (NLP) library providing pre-trained Transformer models.**
- **Pre-trained model applied: facebook/bart-large-mnli (Zero-Shot Classification)**

Business analysis of the product category revenue (RWD)



Mobile's view

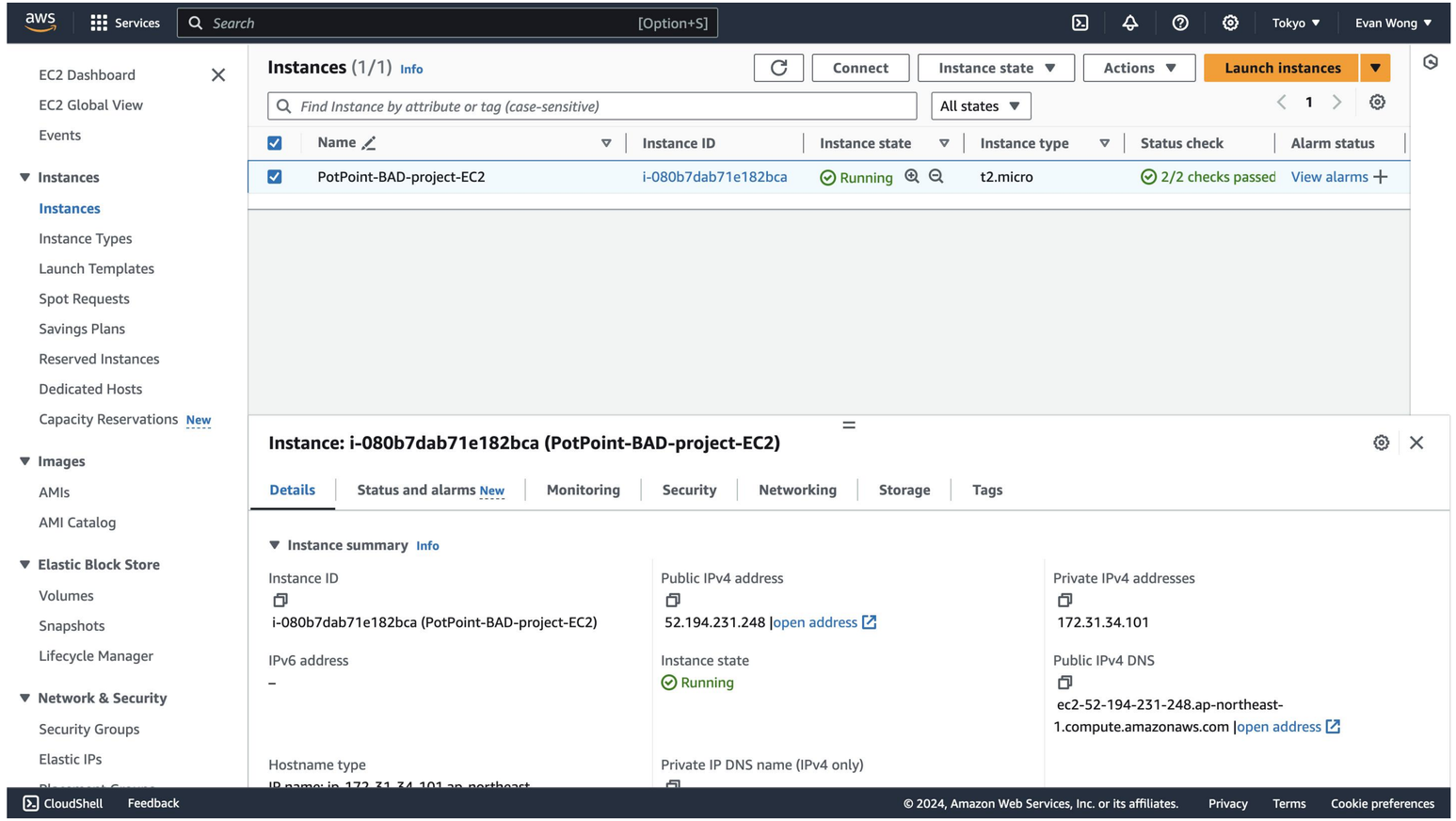


Tablet's view

Deployment

AWS EC2

- Deploy application on EC2.
- OS: Ubuntu
- Public IPv4 address:
  - http://52.194.231.248:8080/
  - 帳號： pot_point
  - 密碼： pot_point



CI/CD

GitHub Actions

- Implement CI/CD, automate testing and deployments.
- Increase the speed and quality of software deliveries while maintaining the stability and reliability of the development process.
- Right image is screenshot of "ci-cd-pipeline.yml"

ci-cd-pipeline.yml

.github > workflows > ci-cd-pipeline.yml

You, 14 hours ago | 1 author (You)

```yaml
name: CI/CD Pipeline
# Define the name of the workflow

on:
  push:
    branches:
      - main  # Specifies the event that triggers the workflow, here it is pushing code to the main branch

jobs:
  build-and-deploy:
    runs-on: ubuntu-latest
    # Specifies the environment in which the workflow runs, here it uses the latest version of Ubuntu virtual environment

    steps:
      - name: Checkout code
        uses: actions/checkout@v2
        # Use actions/checkout@v2 GitHub Action to check out repository code
        You, 15 hours ago • CI-CD
      - name: Set up Node.js
        uses: actions/setup-node@v2
        with:
          node-version: '20'
        # Set up the Node.js environment, specifying version 20 here

      - name: Install dependencies
        run: npm install
        # Install project dependencies

      # - name: Build React app
      #   run: npm run build
        # Build the React application

      - name: Install SSH client
        run: sudo apt-get install openssh-client
        # Install the SSH client to connect to remote servers via SSH later

      - name: Deploy to AWS EC2
        env:
          SSH_KEY: ${{ secrets.SSH_PRIVATE_KEY }}
        run: |
          mkdir -p ~/.ssh
          echo "$SSH_KEY" > ~/.ssh/id_rsa
          chmod 600 ~/.ssh/id_rsa
          ssh-keyscan -H ${{ secrets.SSH_HOST }} >> ~/.ssh/known_hosts
          rsync -av --delete ./ ubuntu@${{ secrets.SSH_HOST }}:PotPoint-server
          ssh -o StrictHostKeyChecking=no ubuntu@${{ secrets.SSH_HOST }} "cd PotPoint-server && npm install --production && pm2 restart all"
        # Deploy to AWS EC2:
        # - Create SSH directory and set up private key
        # - Save the SSH private key to the id_rsa file and set appropriate permissions
        # - Add the remote host to known_hosts
        # - Use rsync to synchronize code to the remote server
        # - Execute remote commands via SSH, install production dependencies, and restart the application

    env:
      AWS_ACCESS_KEY_ID: ${{ secrets.EC2_IAM_ACCESS_KEY }}
      AWS_SECRET_ACCESS_KEY: ${{ secrets.EC2_IAM_SECRET_ACCESS_KEY }}
      AWS_REGION: ap-northeast-1  # Set environment variables, including AWS access key, key ID, and region
      # Define environment variables for use throughout the workflow
```