Problem Chosen	2026 MCM/ICM Summary Sheet	Team Control Number
C		1111111

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Contents

Listing 1: Pythoncode

```python
import requests
import pandas as pd

# □□□□□□□□□□□□□□□□□□□□□□□□□□□□API
api_url = "http://api.worldbank.org/v2/country/all/indicator/SE.XPD.TOTL.GD.ZS?format=json&per_page=1000"

# □□□□□□□□□□□□□□□□□□□□APIAPI
response = requests.get(api_url, params={"lang": "en"})
data = response.json()[1]  # □□□□□□

# □□□□□□□□□□□□□□□□□□CSV
df = pd.DataFrame(data)
df = df[["countryiso3code", "date", "value"]]  # □□□□□□
df.columns = ["□□□□", "□□", "□□□□□□□□GDP"]  # □□□□□□□□□□
df.to_csv("C:/Users/17934/Desktop□□/□□□□□□□□_.csv", index=False, encoding="utf-8")

print("□□□□□□□□□□□□□□□CSV")
```

Listing 2: Matlabcode

```
table = readtable('C:\Users\17934\Desktop\campu_data.csv');
x0=linspace(1,200,200);
y0=table.Study_Hours;
F1=griddedInterpolant(x0,y0,'linear'); □□□□%
F2=griddedInterpolant(x0,y0,'spline'); □□□□□□%
%F2=griddedInterpolant(x0,y0,'spline','extrap'); □□□□□□□□□□□□□□□□□□□
F3=griddedInterpolant(x0,y0,'cubic'); □□□□□□□%
x=1:0.1:200;
y1=F1(x);
y2=F2(x);
subplot(1,2,1);
plot(x,y1);
title□□□□('');
subplot(1,2,2);
plot(x,y2);
title□□□□□□('');□□□□□□□□□□□□□□□
%-□□csape
%pp=csape(x0,y0);
%pp1=finder(pp); □□%□□□□□pp
%pp1=fnint(pp); □□%□□□□□pp
%y3=fnval(pp,x) □□%□□□□□□pp
```

Listing 3: Python crawler code

```
import requests
from bs4 import BeautifulSoup
import pandas as pd

# 1. □□□□□□□□□□□□□□□□□□□□□□□□
web_url = "https://www.example.com/student_study_data.html"
# 2. □□□□□□
response = requests.get(web_url)
soup = BeautifulSoup(response.text, 'html.parser')
# 3. □□□□□□□□□□□□□□□□□□□□99%
table = soup.find('table')
rows = table.find_all('tr')
# 4. □□□□□□□□□CSV
data_list = []
for row in rows:
    cols = row.find_all('td')
    cols = [col.text.strip() for col in cols]
    data_list.append(cols)
df = pd.DataFrame(data_list)
df.to_csv("□□□□□□□□□□_.csv", index=False, encoding='utf-8')
print("□□□□□□□□□□□□□□□□CSV")
```

ready for MCM! try
trytry
trytrytry

1 Notations

Here are all the notations and their meanings in this paper.

Table 1: Notations and Meanings

Symbol	Meaning
t	Time
N	Total reported opioid cases
N_t	Total reported drug cases
λ	Average cases induced by a single case
A_t	Status at t
E	Set containing socio-economic factors with high correlation t
T	Transition matrix
$i(t)$	Proportion of opioid cases in all drug cases at t
μ_1	Average number of drug cases induced by an existing drug case

Table 1: Notations and Meanings (Continued)

Symbol	Meaning
μ_2	Number of opioid cases induced among all drug cases
γ	Drug spread slow down factor
i_0	Status at t
H	Information Entropy
p_0	Initial number of drug cases

$$N_t \frac{\mathrm{d}i}{\mathrm{d}t} = N_t \mu_2 i(t)(1 - i(t)), i(0) = i_0 \tag{1}$$

the equation 1 above shows the dynamic equation of opioid spread.

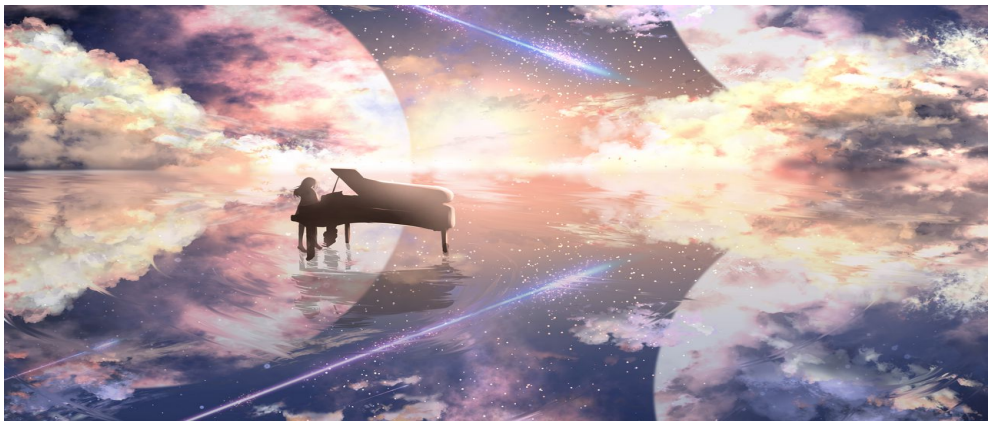
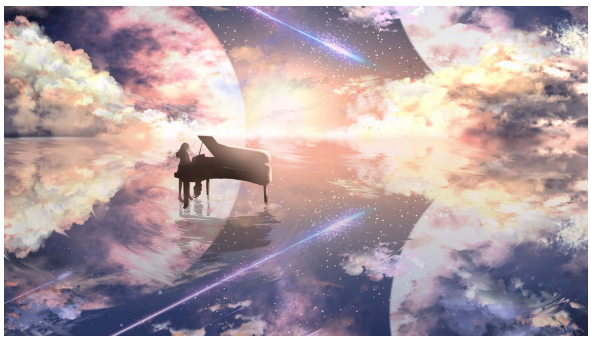


Figure 1: Drug cases and proportion of opioid cases over time

the figure 1 above shows the drug cases and proportion of opioid cases over time.
try to put two figures side by side



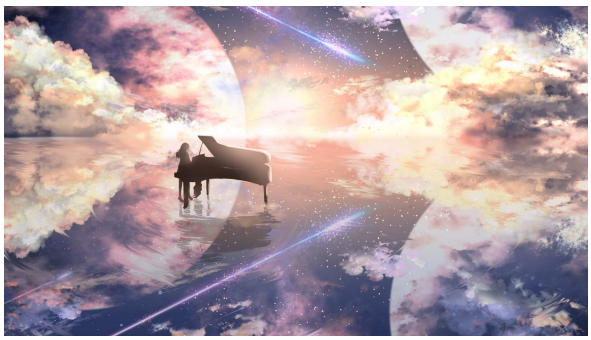


Figure 2: Two pictures in one line (comparison)

use different captions for each figure
fix location

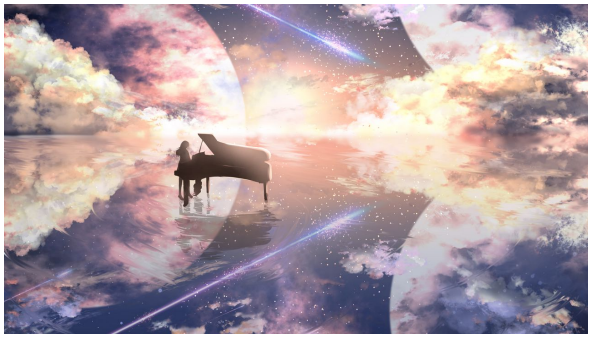


Figure 3: Picture 1

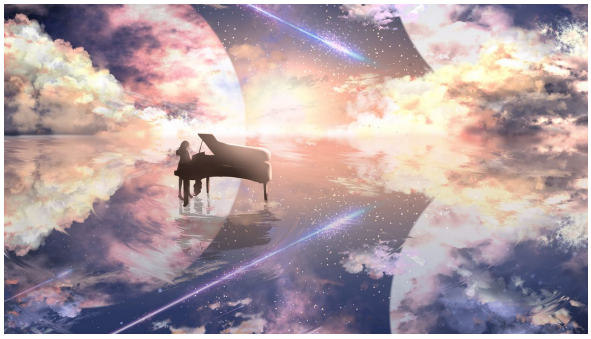
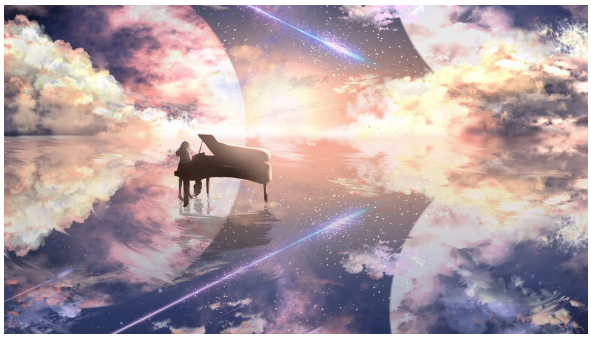


Figure 4: Picture 2



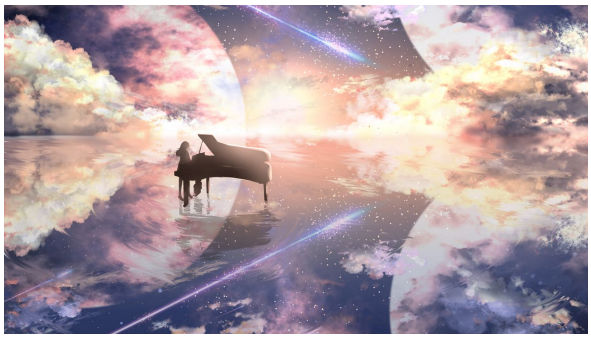


Figure 5: Two pictures in one line