

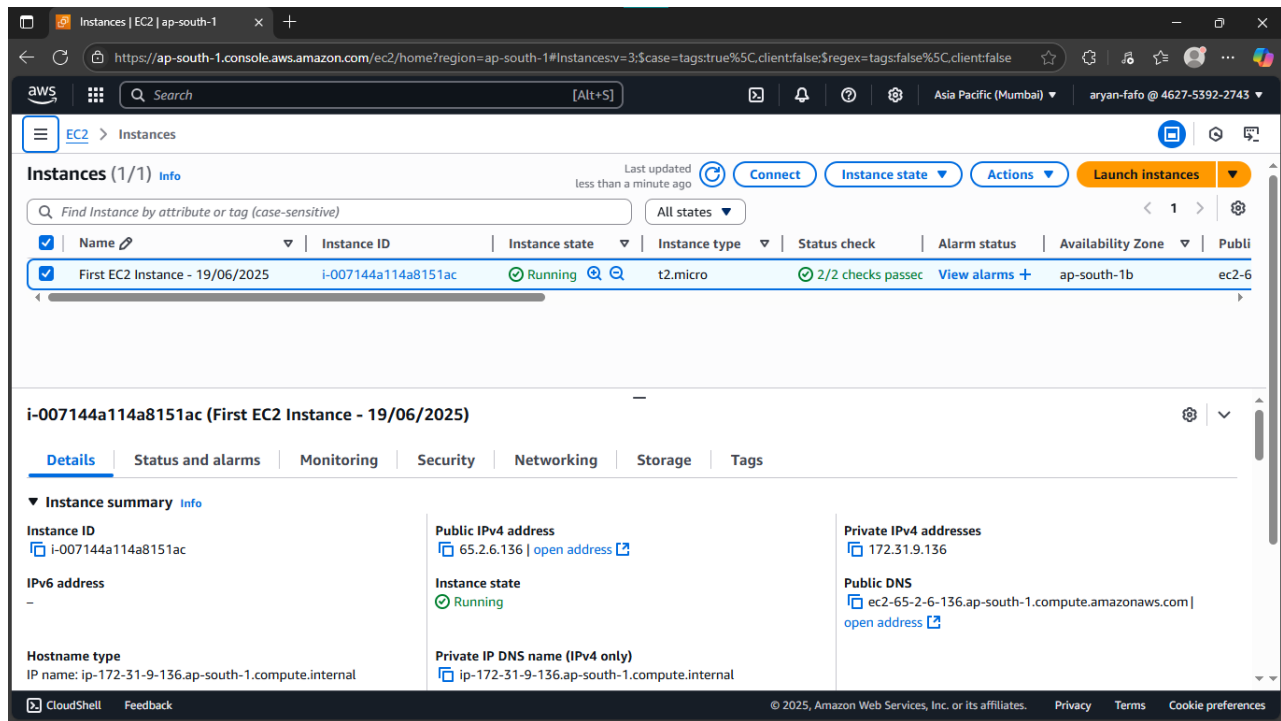
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## Simple Web App with Docker

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## 1. EC2 Instance



The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Instances' page displays a single EC2 instance named 'First EC2 Instance - 19/06/2025' with ID 'i-007144a114a8151ac'. The instance is in a 'Running' state, using a 't2.micro' instance type. The console shows various details including the public IPv4 address (65.2.6.136), private IPv4 address (172.31.9.136), and public DNS name (ec2-65-2-6-136.ap-south-1.compute.amazonaws.com).

## 2. Directory Structure

```
simple-web-app/
|-- app.py
|-- Dockerfile
|-- requirements.txt
```

## 3. Creating the web app and Dockerfile

### a. app.py

```
import os
from flask import Flask

app = Flask(__name__)

@app.route("/")
def main():
    return "Hello World!"

if __name__ == "__main__":
    app.run(debug=True)
```

### b. requirements.txt

```
Flask==3.1.1
```

### c. Dockerfile

```
FROM python:3.12

WORKDIR /app

COPY requirements.txt ./

RUN pip3 install -r
requirements.txt

COPY . ./

EXPOSE 5000

CMD ["python3", "-m", "flask",
"run", "--host=0.0.0.0"]
```

## 4. Running the web app in Docker Container

### a. Building the Image

```
sudo docker build -t simple-web-app:v1 .
```

### b. Running the Container

```
sudo docker run -d -p 8080:5000 simple-web-app:v1
```

## 5. Accessing the web app

