FFmpeg Installation

1. Unzip 'ffmpeg' folder and place in C: Drive
2. Add FFmpeg to the system path
   - Open "Environment Variables.."
   - Under System variables, select "Path" variable, then click "Edit.."
   - Click "New"
   - Add the full path to the 'bin' directory of your FFmpeg (C:\ffmpeg\bin)
3. Open a new Command Prompt
4. Type `'ffmpeg -version'` and press Enter to ensure the ffmpeg is installed correctly

PIP Installation

1. Install the requirements.txt file
   - In the terminal, enter `'pip install -r READ_ME/requirements.txt'`

Use case Execution

1. Use Case 10 & Use Case 12
   - Require manually updating the record ID to a valid ID retrieved from the database table
   - Use case 10:
     - `'PrescribedMedicationId'` from `PrescribedMedicationSchedule` table
   - Use case 12:
     - `'MedicationAdherenceRecordId'` from `MedicationAdherenceRecord` table
2. Use case 13
   - Before running use case 13, run the following command from the project's root folder:
     - `'python notify.py'`
   - This will trigger `transcribe.py` and `patient_report.py`

Modify .env file

DB_HOST=localhost
DB_PORT=5432
DB_NAME=<mark>postgres</mark>
DB_USER=postgres
DB_PASSWORD=<mark>your_db_password</mark>
DB_SCHEMA=SIGMAmed

KINETICA_HOST=https://<mark><your_cluster></mark>/gpudb-0
KINETICA_PORT=<mark>443</mark>
KINETICA_USERNAME=<mark>your_user</mark>
KINETICA_PASSWORD=<mark>your_password</mark>
KINETICA_SCHEMA=   # leave blank to use your default namespace, or set if you have schema rights
KINETICA_USE_TLS=true

Run Sliding Window

1. Run the following command from the project's root folder:
   - ```
     py medication_compliance.py
     ```

Run Kinetica

1. Run the following command from the project's root folder:
   - ```
     py kinetica_analysis_medication.py --limit 500   # omit --limit
     for full load
     ```

In the Kinetica Dashboard (one workbook per query)

Analysis 1
Patients Reporting the Most Side Effects:
```
SELECT       patient_name,       patient_username,       report_count,
unique_side_effects, medications
FROM side_effects_by_patient
ORDER BY report_count DESC
LIMIT 20;
```
X-axis: patient_username
Y-axis: report_count

Analysis 2
Top Side Effects by Medication:
```
SELECT side_effect_name, medication_name, severity, report_count
FROM side_effects_by_medication
ORDER BY report_count DESC
LIMIT 20;
```
X-axis: medication_name
Y-axis: report_count

Analysis 3

Top Side Effects (overall):

```sql
SELECT     side_effect_name,     total_reports,     top_medication,
top_medication_report_count
FROM top_side_effects
ORDER BY total_reports DESC
LIMIT 20;
```

X-axis: side_effect_name

Y-axis: total_reports

Analysis 4

Medication Compliance Summary

```sql
SELECT
    patient_id,
    medication_name,
    alert_type,
    severity,
    violation_count,
    window_start,
    window_end,
    last_violation_date
FROM patient_compliance_alerts
ORDER BY last_violation_date DESC
LIMIT 50
```

X-axis: medication_name

Y-axis: violation_count

Analysis 5

Violation Trend (Week)

```sql
SELECT
    DATE_TRUNC('week', last_violation_date) as week,
    alert_type,
    severity,
    COUNT(*) as alert_count,
    AVG(violation_count) as avg_violations
FROM patient_compliance_alerts
GROUP BY week, alert_type, severity
ORDER BY week DESC
LIMIT 100
```

X-axis: week

Y-axis: alert_count

Series column: alert_type

Analysis 6
High-Risk Patient Analysis

```sql
SELECT
    patient_id,
    COUNT(*) as total_alerts,
    MAX(violation_count) as max_violations,
    MAX(severity) as highest_severity,
    MAX(last_violation_date) as latest_alert
FROM patient_compliance_alerts
GROUP BY patient_id
ORDER BY total_alerts DESC
LIMIT 50
```

X-axis: patient_id
Y-axis: total_alerts