

IntelliInspect API Routes

1. **POST /api/upload**

Uploads a CSV file.

- Request:
 - Content type: multipart/form-data
 - Body: the CSV file to be uploaded
- Response:
 - 200 OK:

```
{
  "totalRows": int,
  "totalCols": int,
  "columnNames": [ "col1", "col2", ... ],
  "startTimestamp": "YYYY-MM-DDTHH:MM:SS",
  "endTimestamp": "YYYY-MM-DDTHH:MM:SS"
}
```
 - 400 Bad Request (if file is invalid)

2. **GET /api/daterange/constraints**

Get min/max date constraints from uploaded dataset.

- Request: None
- Response:
 - 200 OK:

```
{
  "minDate": "YYYY-MM-DDTHH:MM:SS",
  "maxDate": "YYYY-MM-DDTHH:MM:SS",
}
```
 - 400 Bad Request (if no dataset uploaded)

3. **POST /api/daterange/validate**

Validate date ranges for training/testing/simulation.

- Request:
 - Content type: application/json
 - Body:

```
{
  "TrainStart": "YYYY-MM-DDTHH:MM:SS",
  "TrainEnd": "YYYY-MM-DDTHH:MM:SS",
  "TestStart": "YYYY-MM-DDTHH:MM:SS",
  "TestEnd": "YYYY-MM-DDTHH:MM:SS",
  "SimStart": "YYYY-MM-DDTHH:MM:SS",
}
```

- ```

 "SimEnd": "YYYY-MM-DDTHH:MM:SS"
 }

```
- Response:
    - If valid:
 

```

{
 "status": "valid",
 "message": "Date ranges validated successfully.",
 "chartData": { ... }
}

```
    - If invalid:
 

```

{
 "status": "invalid",
 "message": "Date ranges are invalid.",
 "chartData": ["error1", "error2", ...]
}

```

#### 4. POST /api/daterange/submit

Save date changes.

- Request:
  - Same as /api/daterange/validate
- Response:
  - Body:
 

```

{
 "message": "Date ranges submitted successfully."
}

```

#### 5. POST /api/train-model

Log model training parameters and forward to ML service.

- Request:
  - Content type: application/json
  - Body: the CSV file to be uploaded
- Response:
  - 200 OK:
 

```

{
 "TrainStart": "YYYY-MM-DDTHH:MM:SS",
 "TrainEnd": "YYYY-MM-DDTHH:MM:SS",
 "TestStart": "YYYY-MM-DDTHH:MM:SS",
 "TestEnd": "YYYY-MM-DDTHH:MM:SS",
 "SimulationStart": "YYYY-MM-DDTHH:MM:SS",
 "SimulationEnd": "YYYY-MM-DDTHH:MM:SS"
}

```
  - 404 Not Found (if CSV is missing)

## 6. POST /api/simulation/test-single-row

Test prediction on the a singular row of the uploaded CSV.

- Request:
  - No body
- Response:
  - If valid:

```
{
 "timestamp": "...",
 "prediction": number
}
```
  - If invalid: 404 Not Found

## 7. POST /api/simulation

Run simulation on a date range.

- Request:
  - Content type: application/x-www-form-urlencoded
- Response:
  - Returns simulation results using StreamReader class