Loading the MSET tool with inputs

| POST | /MSET | Endpoint Func | ∧ |

Parameters　　　　　　　　　　　　　　　　　　　　　　　　　Cancel　　Reset

No parameters

Request body　　　　　　　　　　　　　　　　　　　　　　　　multipart/form-data ∨

num_trials
integer
`90000`
☐ Send empty value

print_to_cli
boolean
`true` ∨
☐ Send empty value

file_path_1
string($binary)
[Choose File] RATUS1
☐ Send empty value

file_path_2
string($binary)
[Choose File] ratus2
☐ Send empty value

geneset_id_1
string
`233106`
☐ Send empty value

geneset_id_2
string
`233325`
☐ Send empty value

background_file_path_1
string($binary)
[Choose File] KEGGRattusnorvegicusBG.txt
☐ Send empty value

background_file_path_2
string($binary)
[Choose File] KEGGRattusnorvegicusBG.txt
☐ Send empty value

Getting the task id from the loaded input

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8001/MSET' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'num_trials=90000' \
  -F 'print_to_cli=true' \
  -F 'file_path_1=@RATUS1' \
  -F 'file_path_2=@ratus2' \
  -F 'geneset_id_1=233106' \
  -F 'geneset_id_2=233325' \
  -F 'background_file_path_1=@KEGGRattusnorvegicusBG.txt;type=text/plain' \
  -F 'background_file_path_2=@KEGGRattusnorvegicusBG.txt;type=text/plain'
```

Request URL

```
http://127.0.0.1:8001/MSET
```

Server response

Code	Details
200	**Response body**

```
{
  "tool": "MSET",
  "received": {
    "num_trials": 90000,
    "print_to_cli": true,
    "file_path_1": "RATUS1",
    "file_path_2": "ratus2",
    "geneset_id_1": "233106",
    "geneset_id_2": "233325",
    "background_file_path_1": "KEGGRattusnorvegicusBG.txt",
    "background_file_path_2": "KEGGRattusnorvegicusBG.txt",
    "tools_input": "MSET"
  },
  "task_id": "f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee"
}
```

Response headers

```
content-length: 339
content-type: application/json
date: Fri,18 Apr 2025 15:28:48 GMT
server: uvicorn
```

Verifying the status endpoint to retrieve computation status

GET `/status/{task_id}` Get Status

Parameters   Cancel

Name	Description
task_id * required string (path)	f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee

Execute   Clear

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8001/status/f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee' \
  -H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8001/status/f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee
```

Server response

Code	Details
200	Response body

```
{
  "task_id": "f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee",
  "status": {
    "result": {
      "percent_complete": 50,
      "message": "Randomly sampling genes",
      "current_step": "Running trials",
      "genes_processed": 0,
      "trials_completed": 0,
      "time_elapsed": null,
      "time_remaining": null
    }
  }
}
```

Checking the result for the MSET tool through the fastapi endpoint

GET `/result/{task_id}` Get Result

Parameters   Cancel

Name	Description
task_id * required string (path)	f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee

Execute   Clear

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8001/result/f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee' \
  -H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8001/result/f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee
```

Server response

Code	Details
200	Response body

```
{
  "task_id": "f2a3e7d0-93f3-4b5f-9c23-4d6da6f6e7ee",
  "result": {
    "result": {
      "mset_output": {
        "list_1_size": 74,
        "list_2_size": 142,
        "universe_size": 7091,
        "list_1_universe_ratio": 0.010435763644055846,
        "list_2_universe_ratio": 0.020025384289945002,
        "intersection_size": 21,
        "num_trials": 90000,
        "alternative": "Greater",
        "method": "Over",
        "trials_gt_intersect": 0,
        "p_value": 0,
        "histogram": {
          "0": 19804,
          "1": 30712,
          "2": 22845,
          "3": 11263,
          "4": 3910,
          "5": 1146,
          "6": 264,
          "7": 43,
```

Error logging for invalid input

```
[STATUS] 10% — Retrieving gene sets (Loading data)

Plugin result:
{'Error': 'Please provide geneset_id or file_path for group 1 and group 2'}
⚠️ Histogram data not found or not in expected format.
```