

HBP CodeJam #10

Marsilius-College, Heidelberg University
Heidelberg, Germany
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Single cell modelling workflow

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CNR

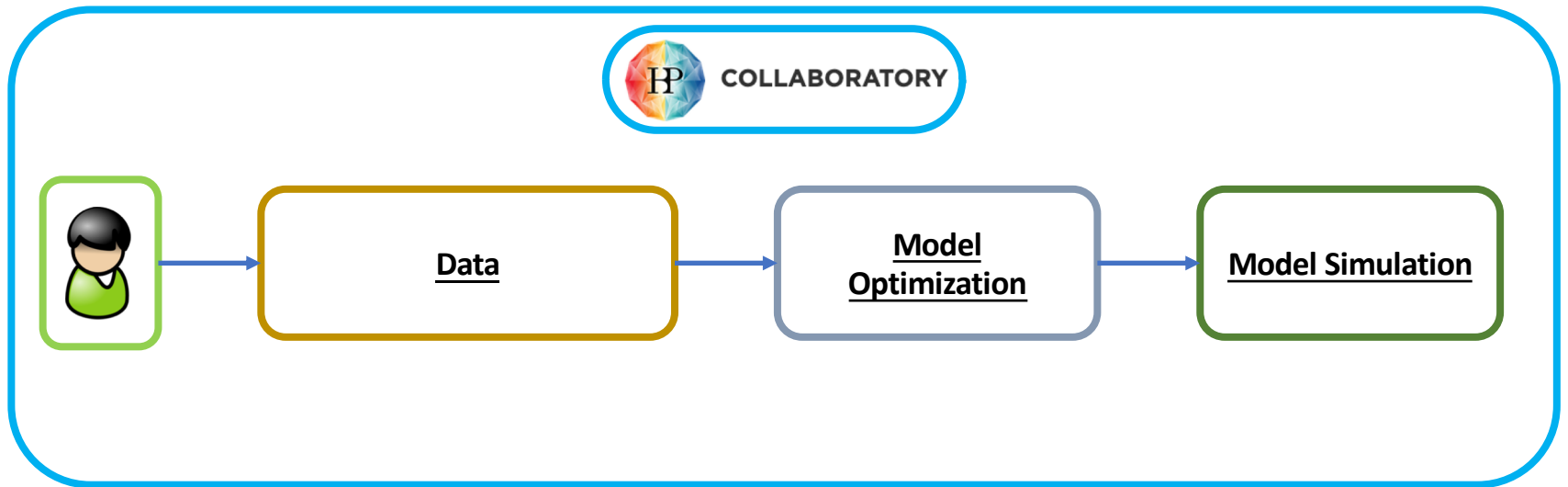


Institute of Biophysics

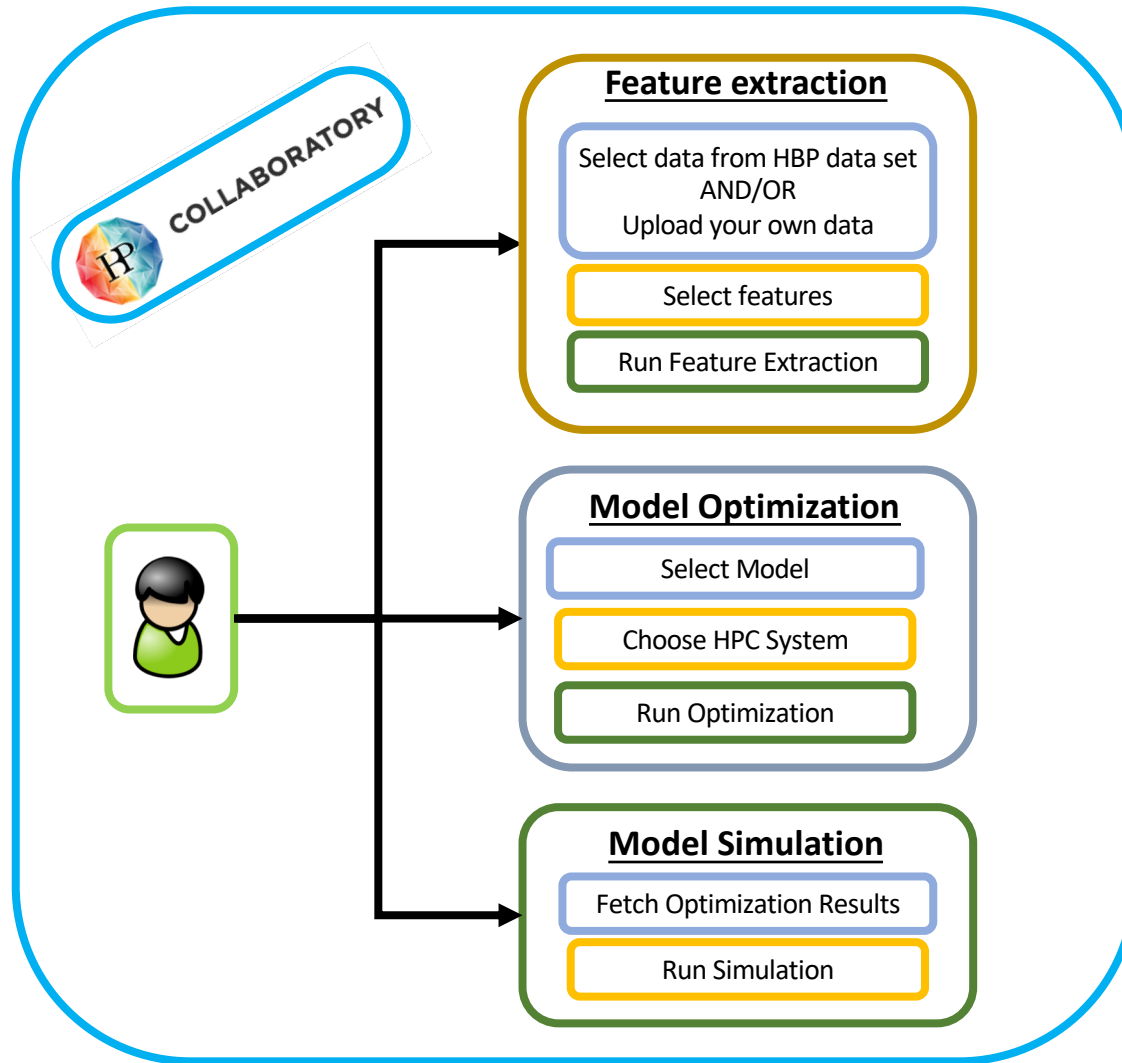
lucaleonardo.bologna@cnr.it



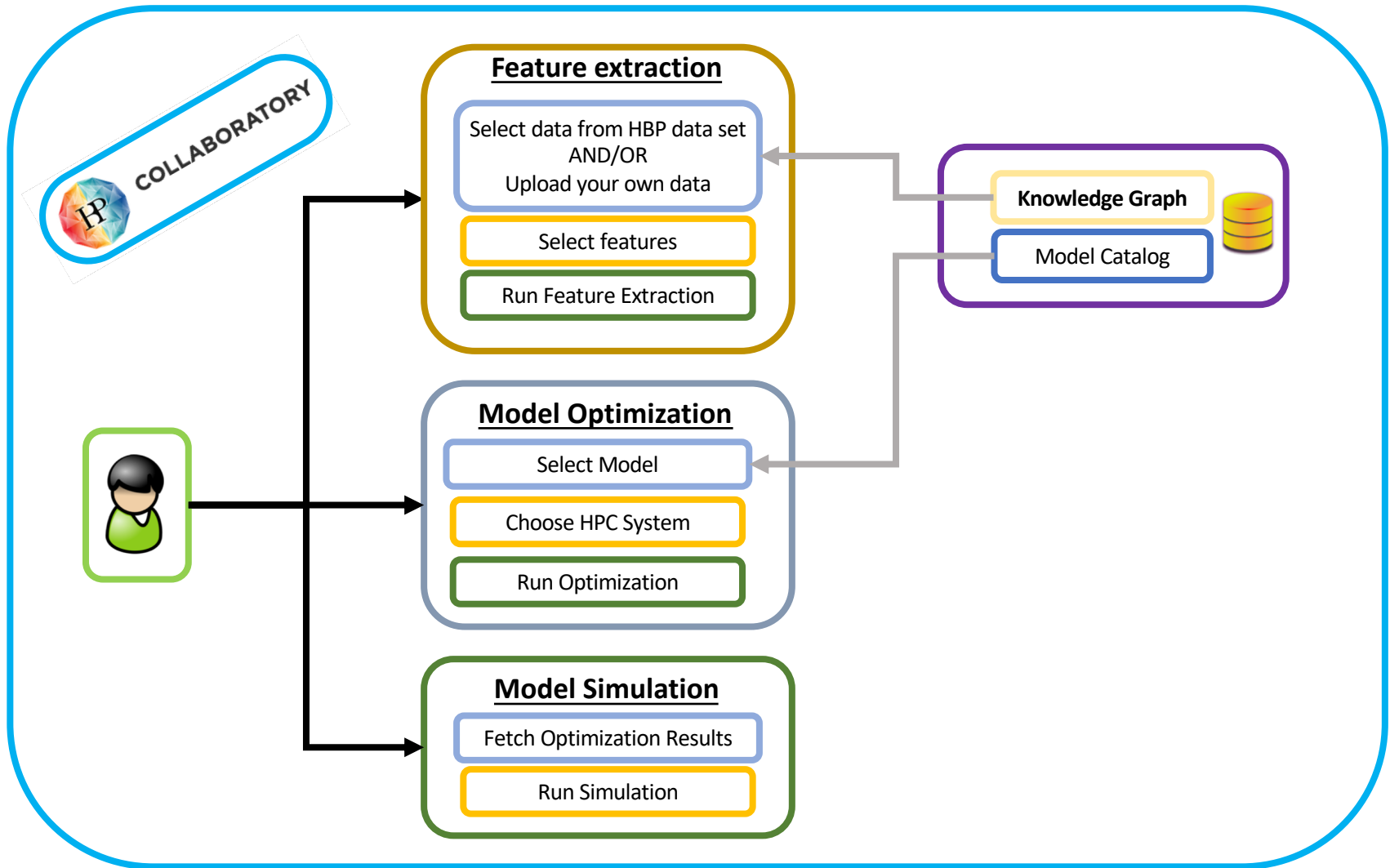
Workflow



Workflow



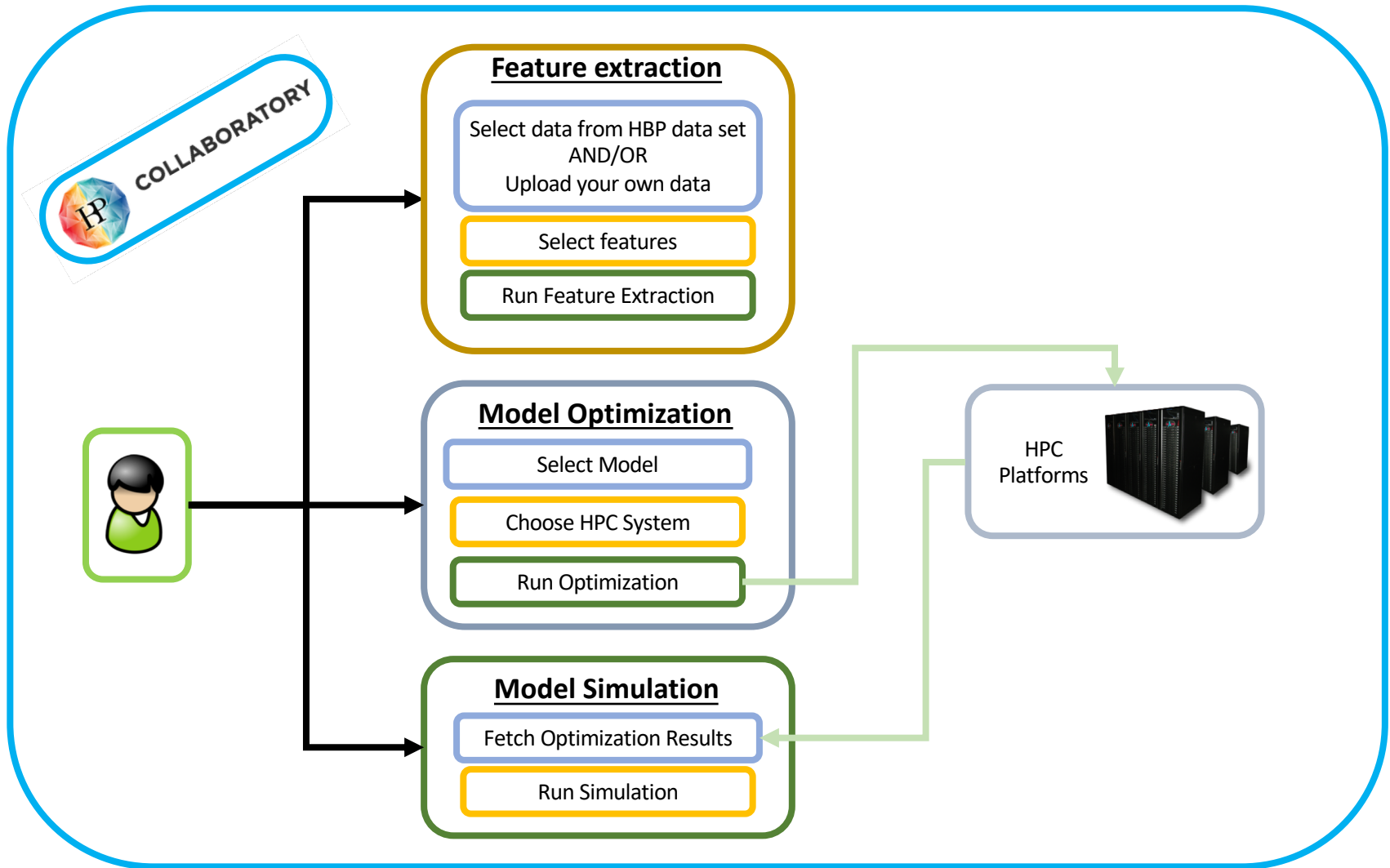
Workflow



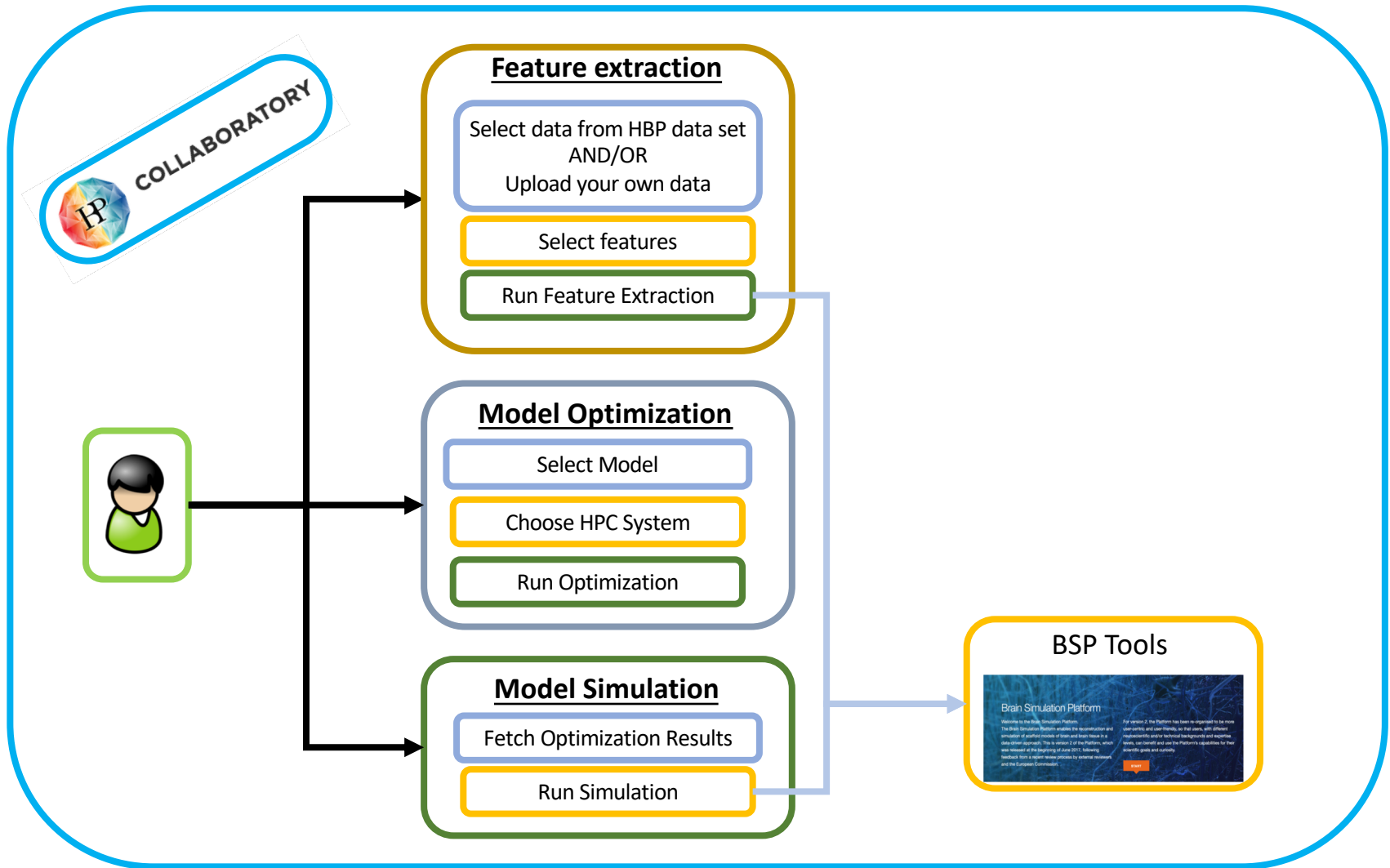
<https://bsp.humanbrainproject.eu>



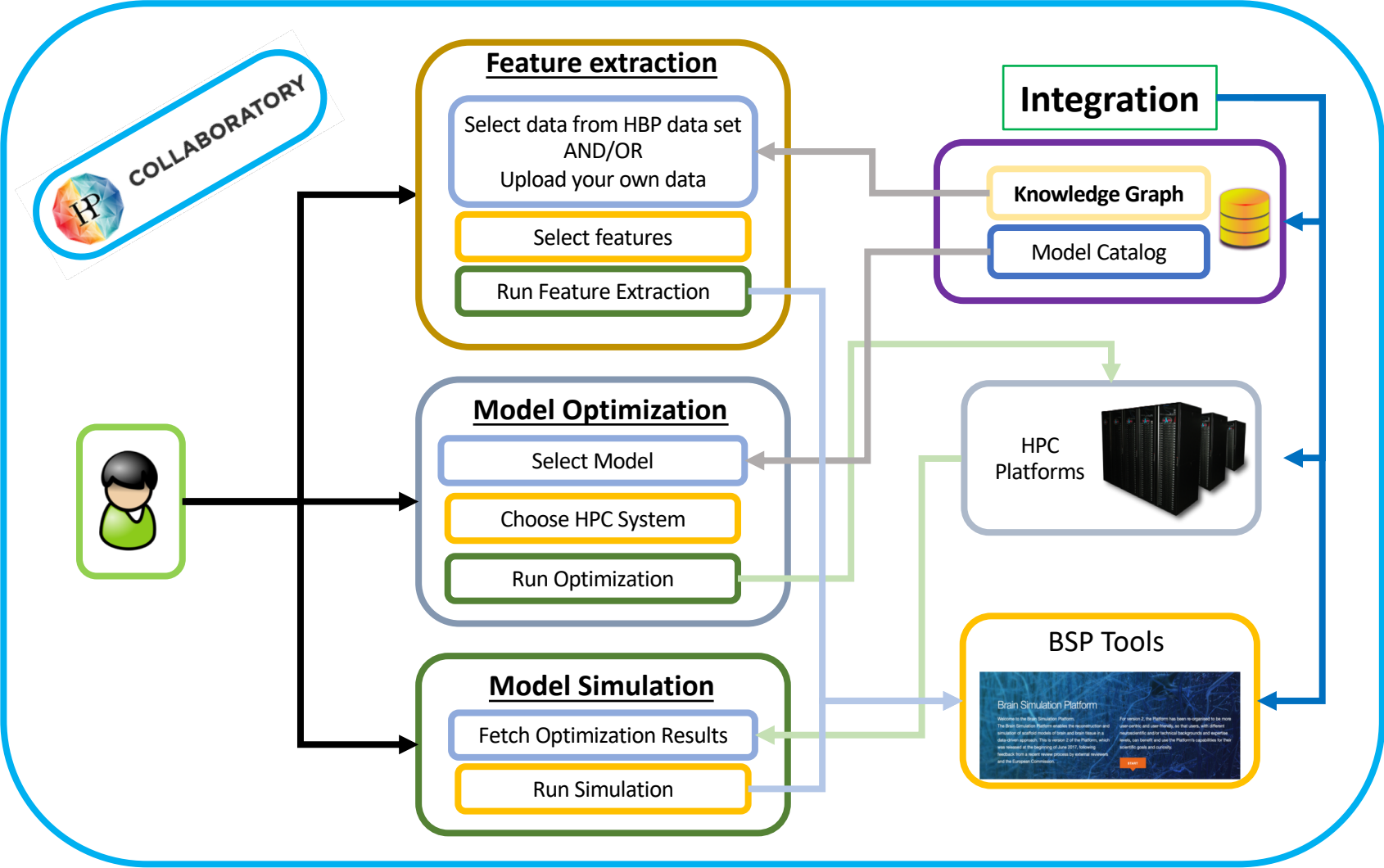
Workflow



Workflow

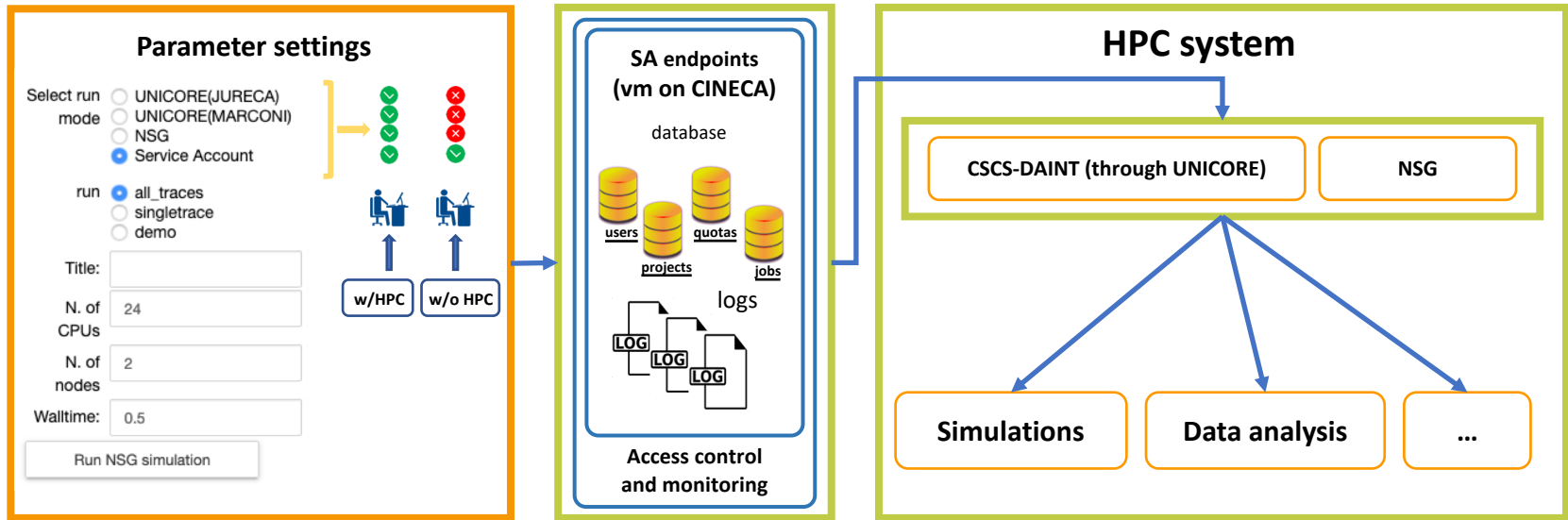


Workflow



<https://bsp.humanbrainproject.eu>

Service Account



GitHub

[HumanBrainProject/hbp-bsp-service-account](https://github.com/HumanBrainProject/hbp-bsp-service-account)

Service Account documentation
Hosted on github (public)
referenced in the BSP Guidebook

- Get info on all jobs for all users

Example Request

```
GET /admin/jobs/ HTTP/1.1
Authorization: Bearer Token
```

Example Response

```
HTTP/1.1 200 OK
Content-Disposition: application/json

[
  {
    u'end_date': u'2019-03-21T13:15:03Z',
    u'failed': False,
    u'id': 4,
    u'init_date': u'2019-03-21T13:13:59Z',
    u'job_id': u'42AA3163-F8F7-4502-9640-431ED649DF',
    u'owner': u'301330',
    u'project': 2,
    u'project_hpc': u'PIZDAINT',
    u'project_name': u'bsp_pizdaint_01',
    u'runtime': 0.5,
    u'stage': u'SUCCESSFUL',
    u'terminal_stage': True,
    u'title': u''
  },
  ...
]
```

- Get a list of all jobs for the specified user

Example Request

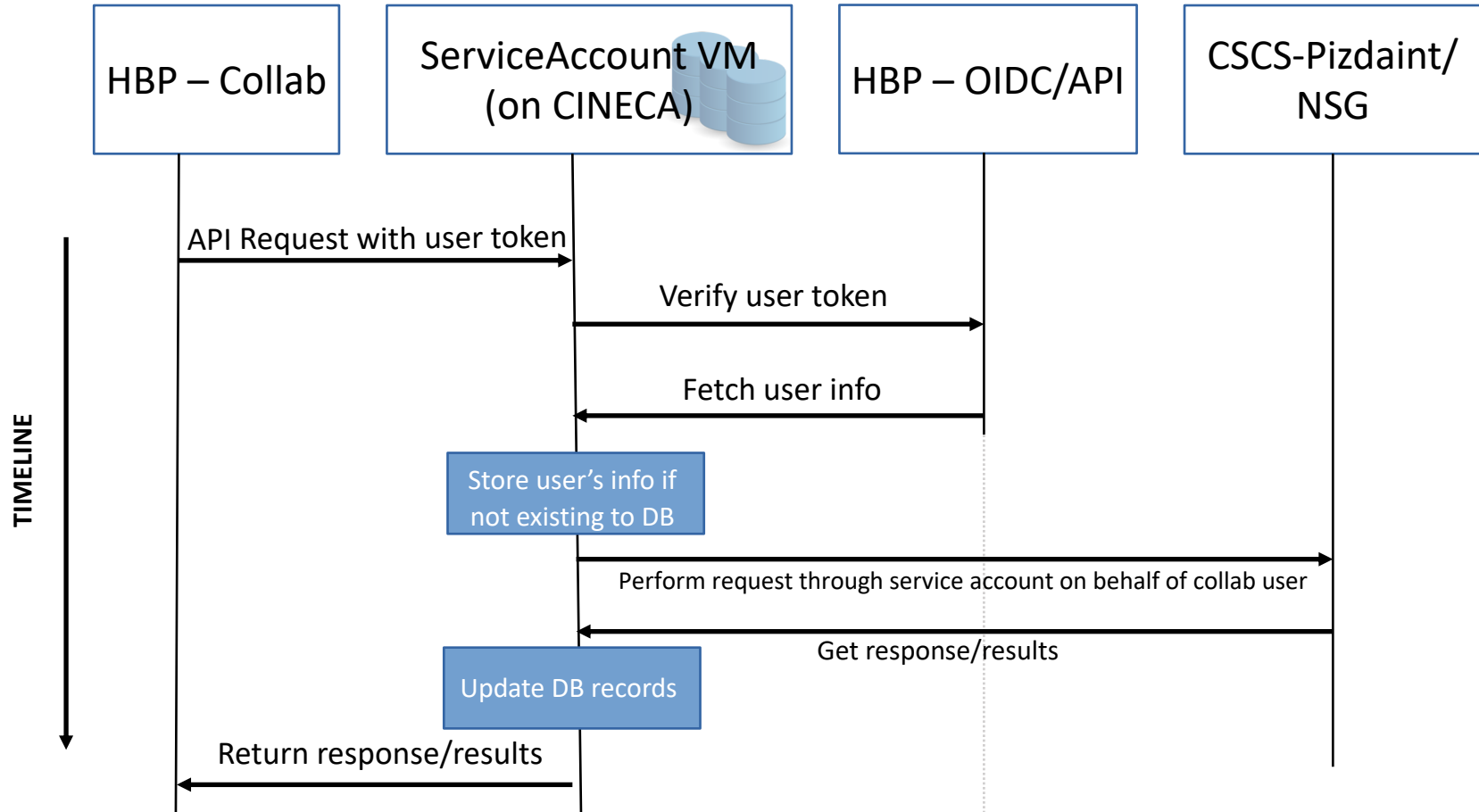
```
GET /admin/jobs/301330/ HTTP/1.1
Authorization: Bearer FakeToken
```

Example Response

```
HTTP/1.1 200 OK
Content-Disposition: application/json

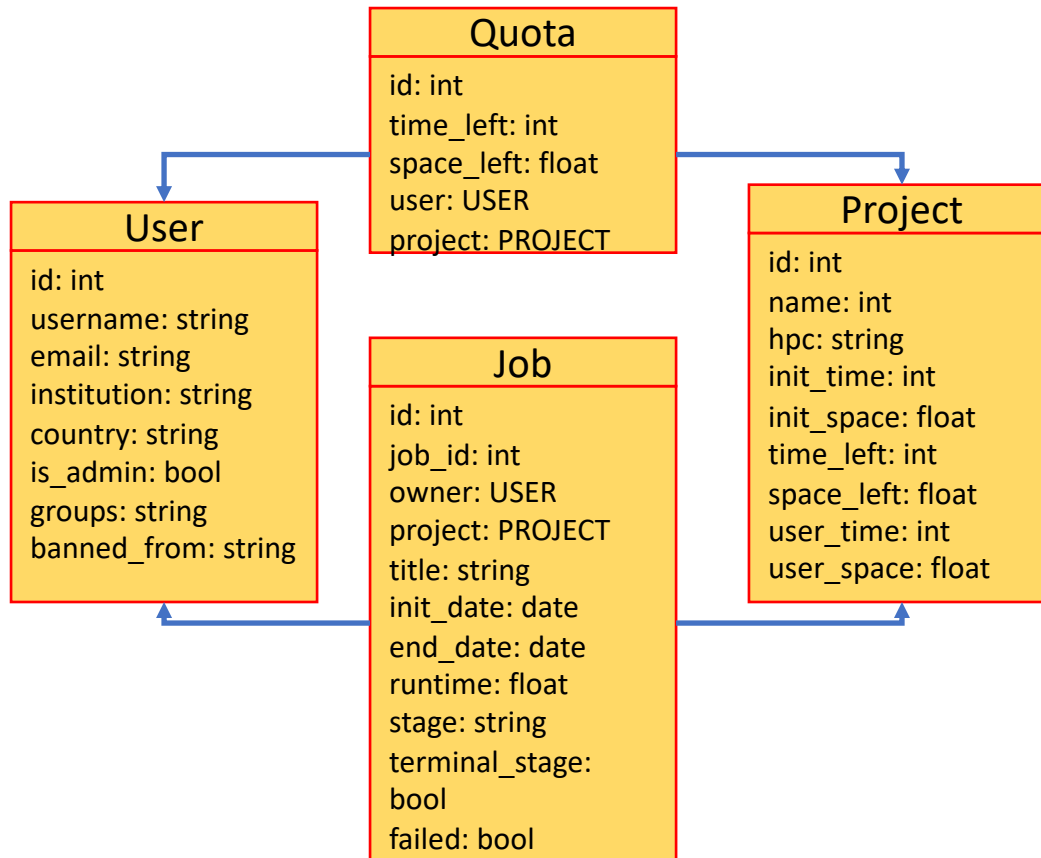
[
  {
    u'end_date': u'2019-03-21T13:15:03Z',
    u'failed': False,
    u'id': 4,
    u'init_date': u'2019-03-21T13:13:59Z',
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    u'project': 2,
    u'project_hpc': u'PIZDAINT',
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    u'runtime': 0.5,
    u'stage': u'SUCCESSFUL',
    u'terminal_stage': True,
    u'title': u''
  },
  ...
]
```


Service Account Workflow



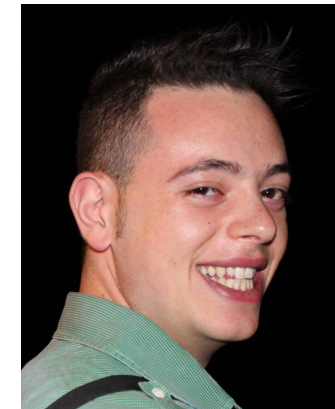
Django REST Framework

Database



Operations

- Submit job
- Fetch job status
- Fetch results
- Delete job
- Get/Update quotas
- Get/Update projects



Roberto Smiriglia

Example call

UNICORE

Job descriptor (CSCS)

```
Job = {  
  "Executable": "slurm command",  
  "Name": "jobname",  
  "Resources": {  
    "Nodes": "2"  
    "CPUsPerNode": "12"  
    "Runtime": "120"  
    "NodeConstraints": "mc"  
  }  
}
```



Job descriptor (SA -> CSCS)

```
Job = {  
  "command": "slurm command",  
  "node_number": "2",  
  "core_number": "12",  
  "runtime": "2.0",  
  "title": "jobname"  
}
```



NSG

Job descriptor (NSG)

```
Job = {  
  "tool": tool,  
  "vparam.number_cores_" : "2",  
  "vparam.number_nodes_" : "12",  
  "vparam.runtime_" : "2.0",  
}
```



Job descriptor (SA ->NSG)

```
Job = {  
  "tool": "tool"  
  "node_number": "2",  
  "core_number": "12",  
  "runtime": "2.0",  
  "title": "jobname"  
}
```



Acknowledgements



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