# Bibliotheca Alexandria HPC

# -NoAdmin-

Sohaila Hazem
Salma Essmat

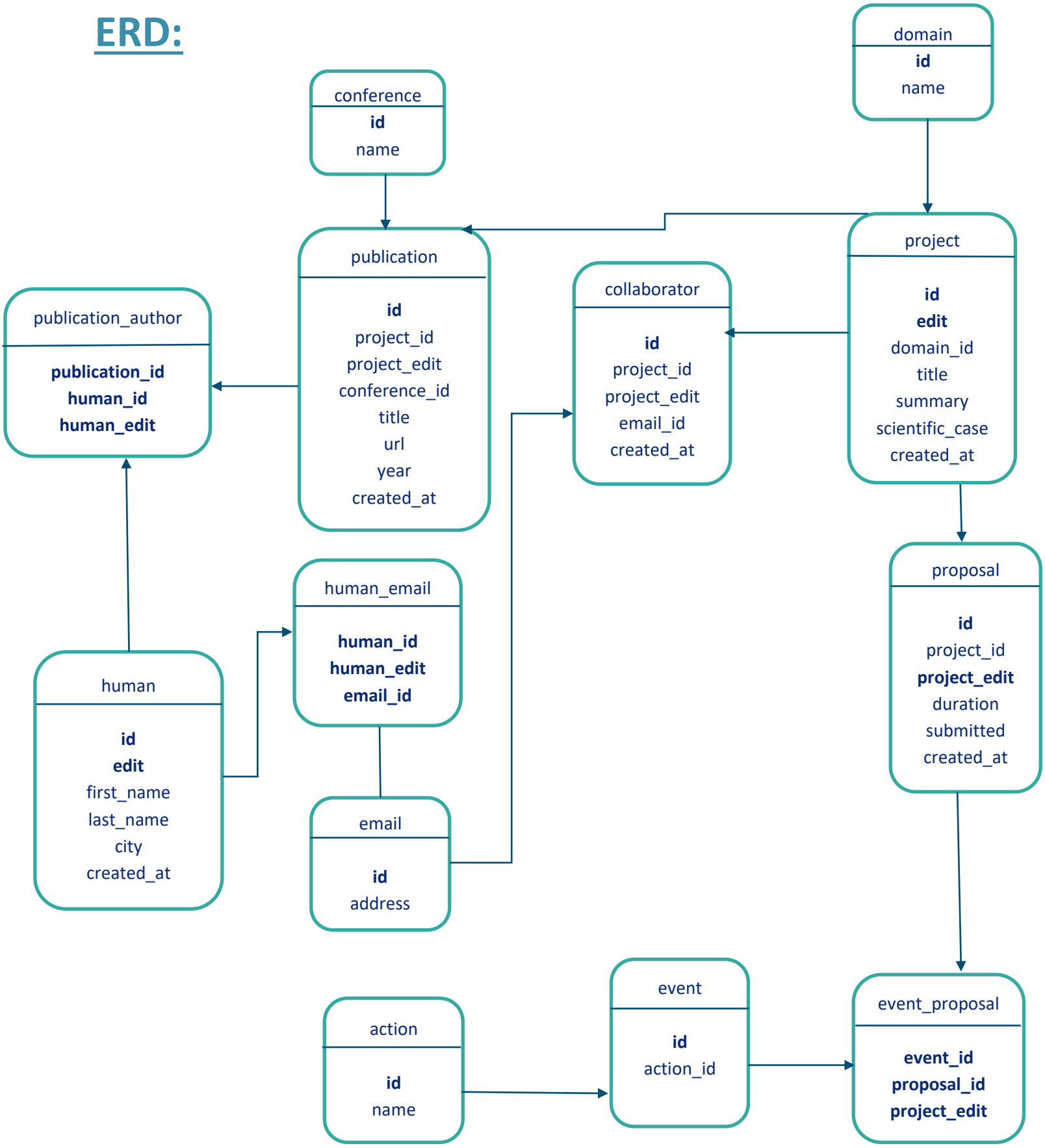
## Content:

## Objective:

Our main goal was to build a website that:

- Automates account administration tasks on the HPC.
- Keeps a record of publications that come out as a result of work carried out on the cluster.
- Display publications per project.

# ERD:


domain
id
name
conference
id
name
publication
id
project_id
project_edit
conference_id
title
url
year
created_at
project
id
edit
domain_id
title
summary
scientific_case
created_at
publication_author
publication_id
human_id
human_edit
collaborator
id
project_id
project_edit
email_id
created_at
proposal
id
project_id
project_edit
duration
submitted
created_at
human_email
human_id
human_edit
email_id
human
id
edit
first_name
last_name
city
created_at
email
id
address
event
id
action_id
event_proposal
event_id
proposal_id
project_edit
action
id
name

## Algorithm: Flow between Webpages

### 1) Home Page

- Gives a brief about the Supercomputing Facility in BA.

### 2) Projects Page

- Lists all the projects in all domains.
- User can simply search for the project's title or
- Filter projects according to their **domain**.

*For each project section user will find:*

✓ Domain title
✓ Project title
✓ When was it created.
✓ Collaborators.

- By clicking on any project title, you will go to the chosen **Project's Page**.

## 3) Project Page

After the title, creation time, and collaborators list inherited from the previous page comes the project's:

- ✓ Summary
- ✓ Scientific Case
- ✓ Duration in months
- ✓ Number of publications for this project title
- ✓ Add publication button.

The Add publication button is the star feature of our project, which makes it easy for the user to add a new publication for an existing project.
User get transferred to the **'Add publication page'** by simply pressing on this button.

## 4) Add Publication Page

For the chosen project user will add publication by filling out the form consisting of:

- ✓ Publication Title
- ✓ Publication URL
- ✓ Publication year (Any year from 2000 to current year 2022)
- ✓ Upload a pdf
- ✓ Upload an image
- ✓ Choose conference place or add a new place if not listed
- ✓ Choose Collaborators
- ✓ User can either upload a pdf or enter a URL for the publication, or even both.

After submitting this form, if all the validation succeeds, user will be directed to another page which shows all the information about the user's added publication. **(Publication Page)**

## 5) Publication Page

After the title, year, creation time, domain, and publication authors list inherited from the previous page comes the publication's:

- ✓ Source Project's title
- ✓ Conference
- ✓ Image if there was one inserted
- ✓ Ability to download or view the inserted PDF if exists.

## 6) Publications Page

Lists all the publications in all domains and years.

User can filter publications according to their **Domain and/or Publication year.**

By clicking on any publication title, you will go to the chosen **Publication's Page**.

## Code Snippets:

- Filtering Publications Feature in Publication Controller.

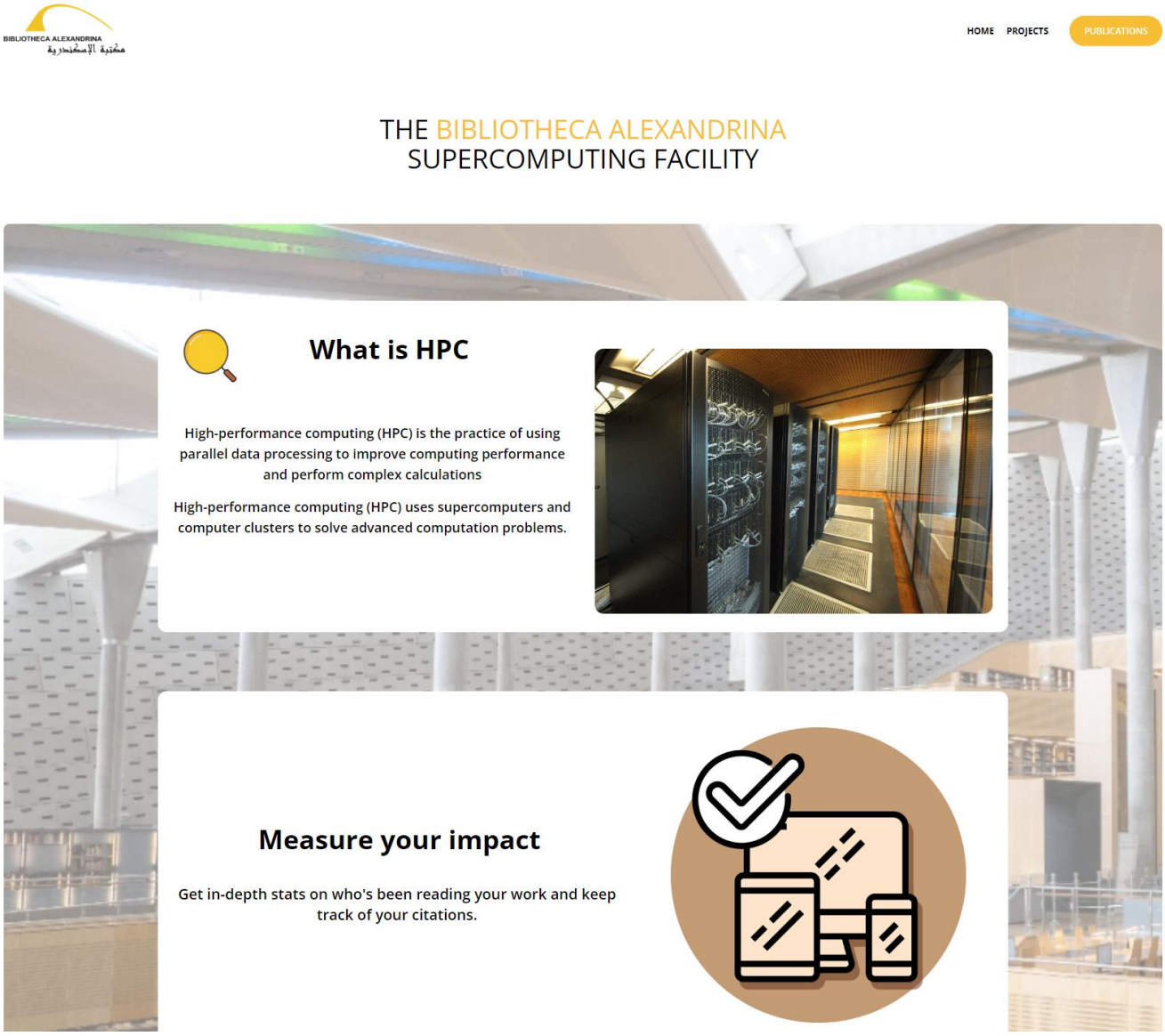
```php
$publications = new Collection;
$currentDomains = new Collection;

if (request( key: 'domain') or request( key: 'year')) {

    if (request( key: 'domain') === NULL) {
        $domain_ids = Domain::pluck( column: 'id');
    } else {
        $domain_ids = request( key: 'domain');     //gets the checked domain filter
    }

    if (request( key: 'year') === NULL) {
        $years = Publication::groupBy( ...groups: 'year')->orderBy( column: 'year', direction: 'desc')->pluck( column: 'year');
    } else {
        $years = request( key: 'year');     //gets the checked year filter

    }

    foreach ($domain_ids as $domain_id) {
        foreach ($years as $year) {

            $publication = Publication::whereHas( relation: 'project', function ($query) use ($domain_id, $year) {  //filters using both domain and year
                $query->where('domain_id', $domain_id)->where('year', $year);
            })->get();

            $publications = $publications->merge($publication);     //returns filtered publications
            $domain = Domain::where( column: 'id', $domain_id)->first();
            $currentDomains->push($domain);

        }
```

- Creating a new publication instance in Publication Controller.

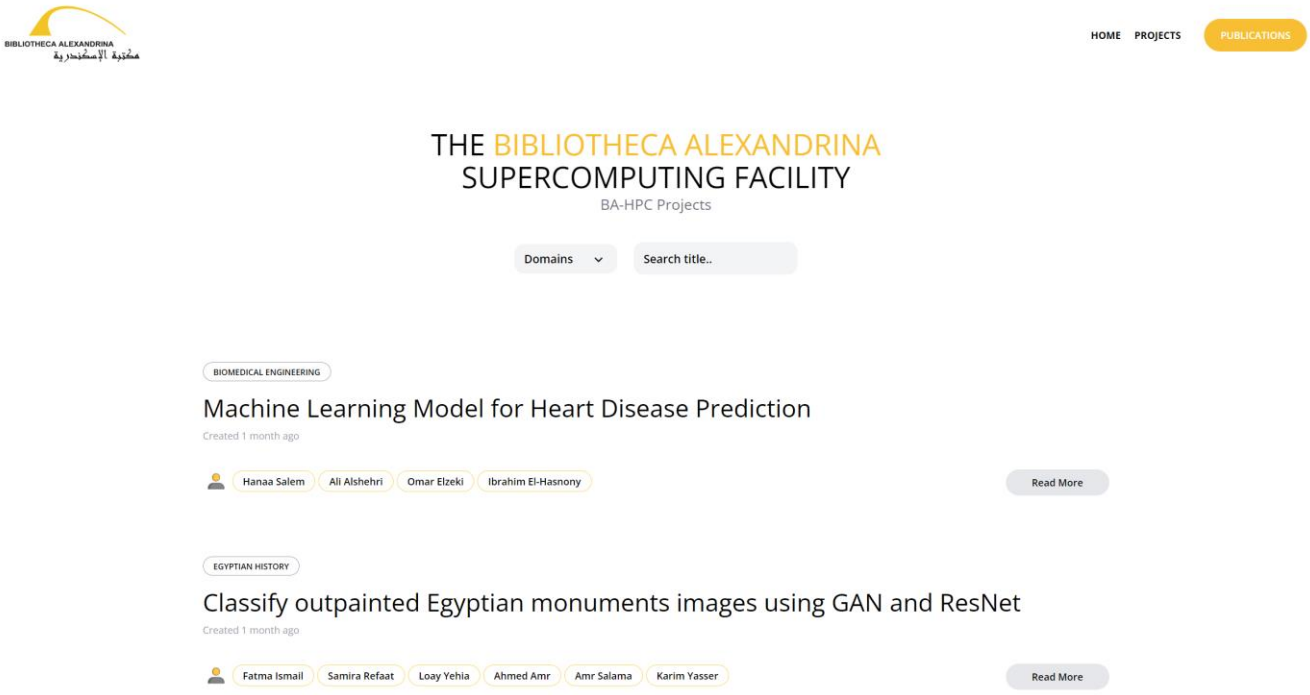
```
request()->validate([
    'title' => 'max:255',
    'human_id' => 'required'
]);
if (request( key: 'other')) {
    $conference = Conference::create(array(
        'name' => request( key: 'other'),
        'islisted' => 0
    ));
    $conference_id = $conference->id;

}
$publication = new Publication();
$publication->project_id = $id;
$publication->project_edit = $project->edit;
$publication->conference_id = $conference_id;
$publication->title = request( key: 'title');
$publication->url = request( key: 'url');
$publication->year = request( key: 'year');
if ($request->hasFile( key: 'image')) {
    $file_img = $request->file( key: 'image');
    $extension_img = $file_img->getClientOriginalExtension();  //gets image ext.
    $filename_img = time() . '.' . $extension_img;
    $file_img->move( directory: 'uploads/publication/', $filename_img);
    $publication->image = $filename_img;

} else {
    $publication->image = '';
}
if ($request->hasFile( key: 'file')) {
    $file = $request->file( key: 'file');
    $extension = $file->getClientOriginalExtension();  //gets file ext. (.pdf)
    $filename = time() . '.' . $extension;
    $file->move( directory: 'uploads/publication/', $filename);
    $publication->file = $filename;

} else {
    $publication->file = '';
}
```

# Screenshots:

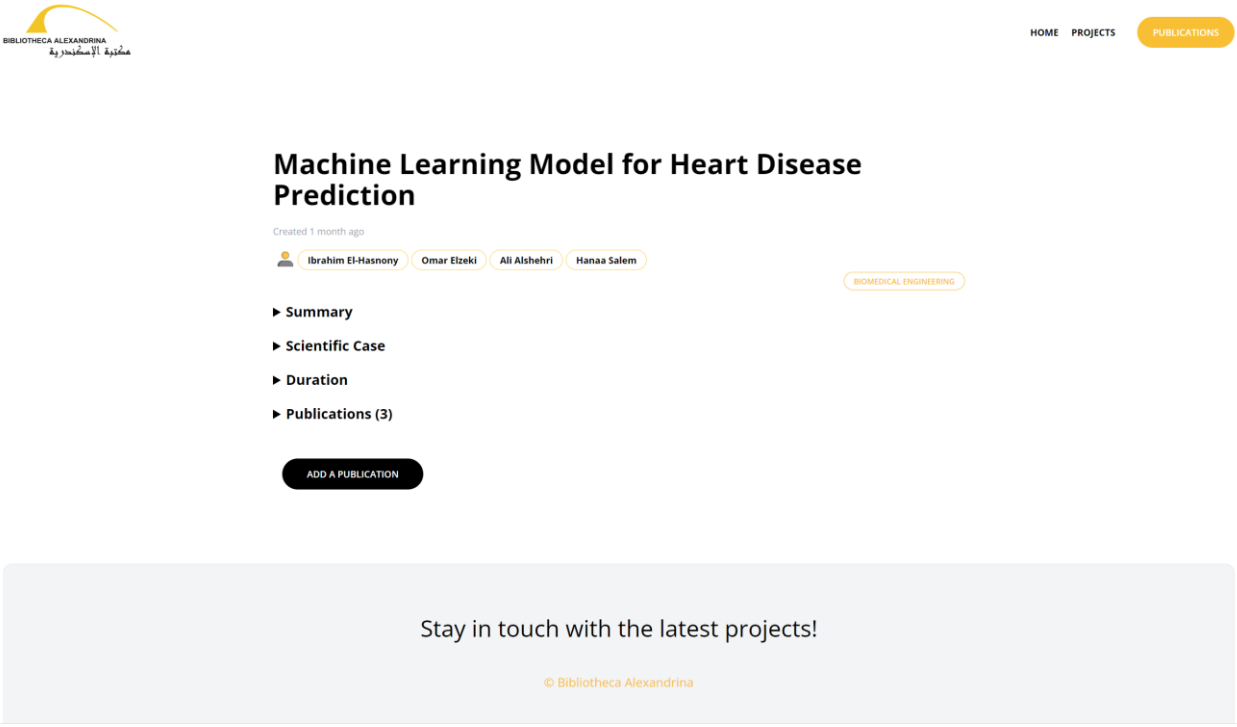
- **Home Page**



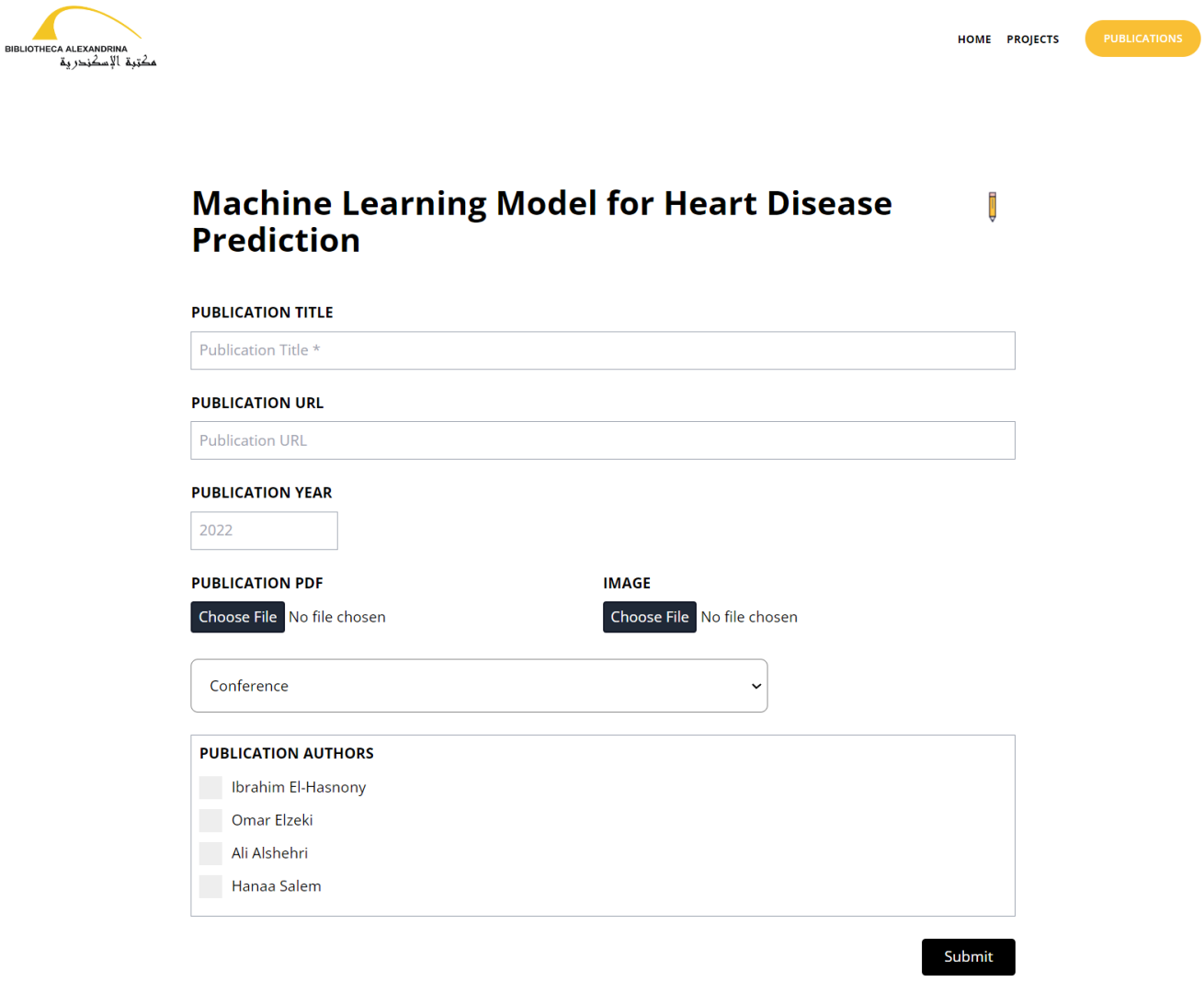
- **Projects Page**



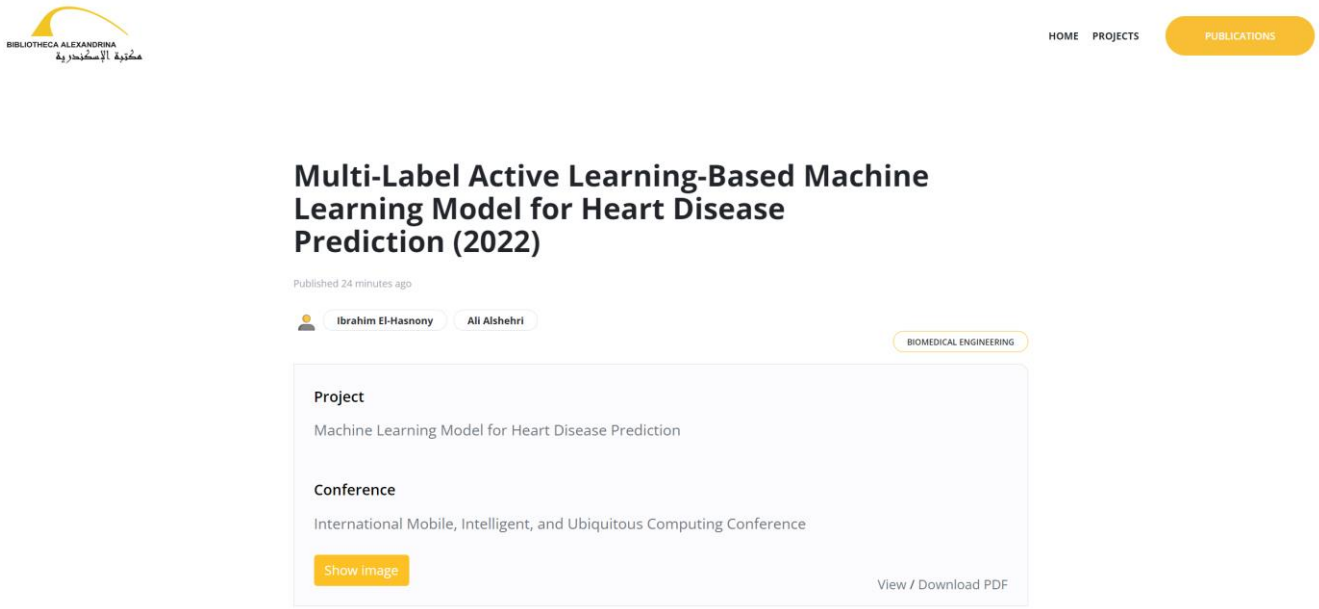

- **Project Page**



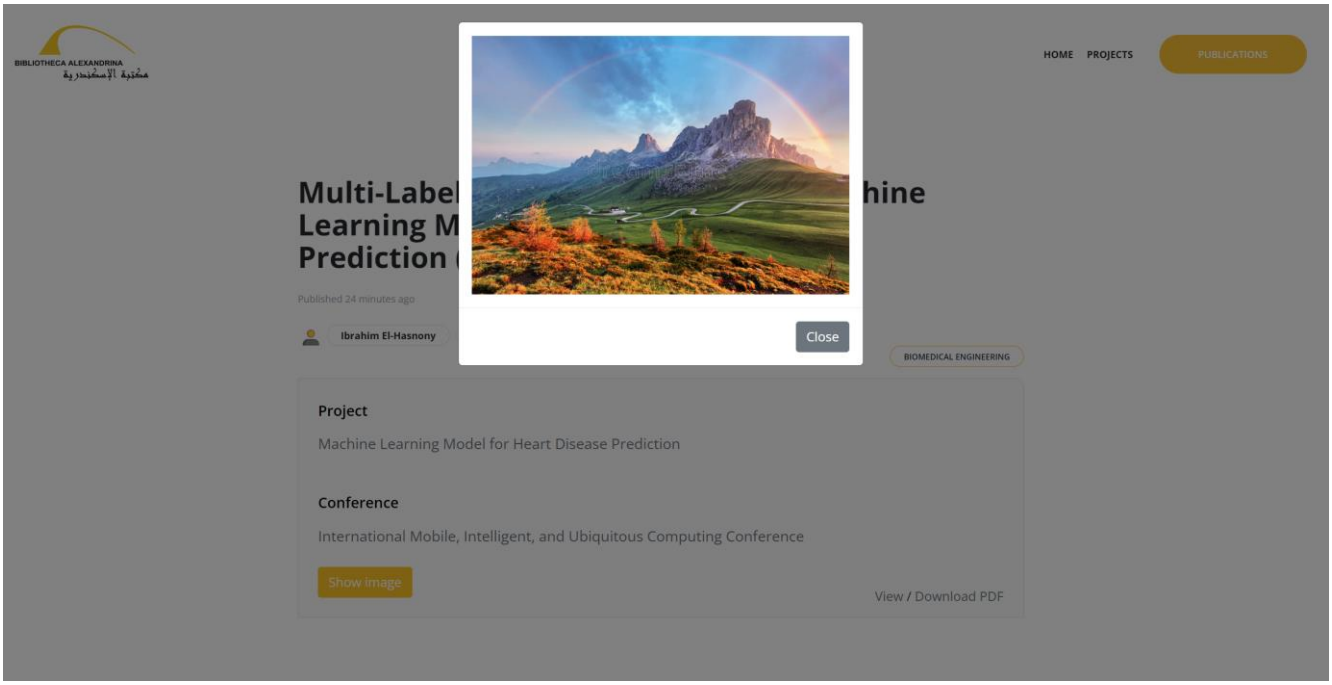
- **Add Publication Page**



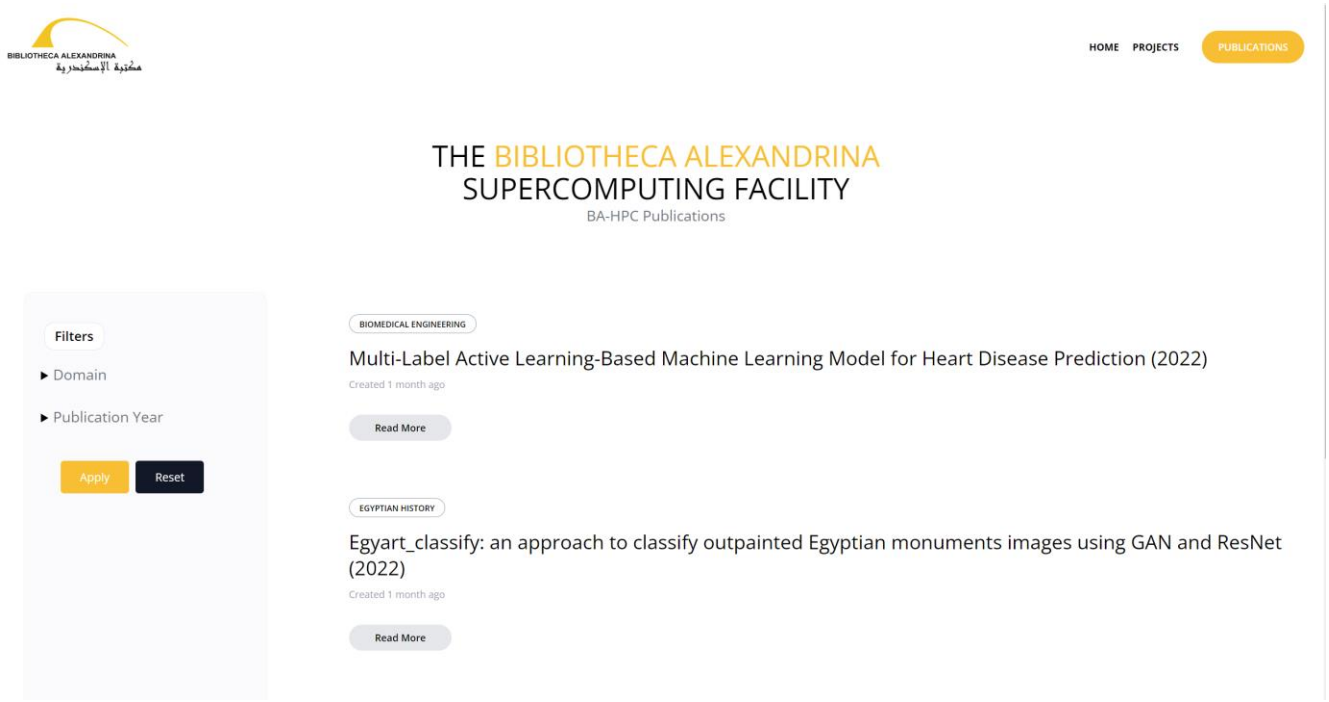
- **Publication Page**




- **When user presses on show image button.**



- **Publications Page**




## Feedback:

We got to experience real work life and environment, friendly colleagues, and cleanliness in workplace.

We also were introduced to a framework that we never worked with before, adding to our knowledge and problem-solving skills.

Our supervisors Eng. Esraa Mohamed and Eng. Mohamed Elsayed have provided the guidance, support, and all the help we needed to achieve our task.

We are more than thankful for this amazing experience, and we wish that we produced a satisfying output that reached your expectations.