InterMine

ORGANISATION: InterMine

PROJECT N° 3: Design and implement InterMine TRAINING PORTAL

Outreachy Internship Application 2020

Username and contact information.

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Education

University: **Catholic University Institute of Buea (Cameroon)**

Degree: **Bachelor of Science degree**

Field: **Accountancy**

Graduation period: **December 2019**

Personal Background

I am corine, a female accounting clerk living in Cameroon. My first ever academic passion has always been finance. Though I developed another one for tech-oriented fields by my sophomore year when a strike started in my region and we were forced out of schools for several months. With my idle time, I took lots of online training with prime aim of keeping me busy. I took leadership courses with Yali, Office 365 classes on Microsoft Academy, VBA tutorials on guru, Wordpress back end development on onsite trainings such as Wordcamp and others. Two years to my graduation I took lots of short courses every time I had some free time. During that period my interest diverted a little from finance to more tech-oriented areas.

Today I earn a living mostly from freelance jobs. I help people out with; typing jobs, social media page build-up and maintenance, building digital supports (brochures, flyers, presentations, etc), assisting with website design and content, data analytics on excel. Today I don't know if I can still construct an end of year financial statement.

I am actually new to open source. I have never contributed to any FOSS project before, reason why I am very anxious about this application and participate in this contribution phase with delight. It a pleasure to work with people of different cultures and thinking, share our ideas to make the result awesome! I hope the experience will last longer than this contribution phase and I actually intend to participate to more open source projects in the future.

About the project

Abstract

InterMine is an open source data warehouse system, licensed under the LGPL 2.1. InterMine is used to create databases of biological data accessed by sophisticated web query tools. InterMine can be used to create databases from a single data set or can integrate multiple sources of data. Support is provided for several common biological formats and there is a framework for adding other data. InterMine includes a user-friendly web interface that works 'out of the box' and can be easily customised.

InterMine makes it easy to integrate multiple data sources into a single data warehouse. It has a core data model based on the sequence ontology and supports several biological data formats, allowing sysadmins to configure which organisms or data files are required. It is easy to extend the data model and integrate other data, with a web service API, clients in seven different languages, and an XML format to help import custom data.

Intermine possesses a tutorial page and user documentation to facilitate training on the software. These pages have already consistent material especially the user documentation page. I think the great challenge will be not creating more content but making the existing content more exploitable and user friendly.
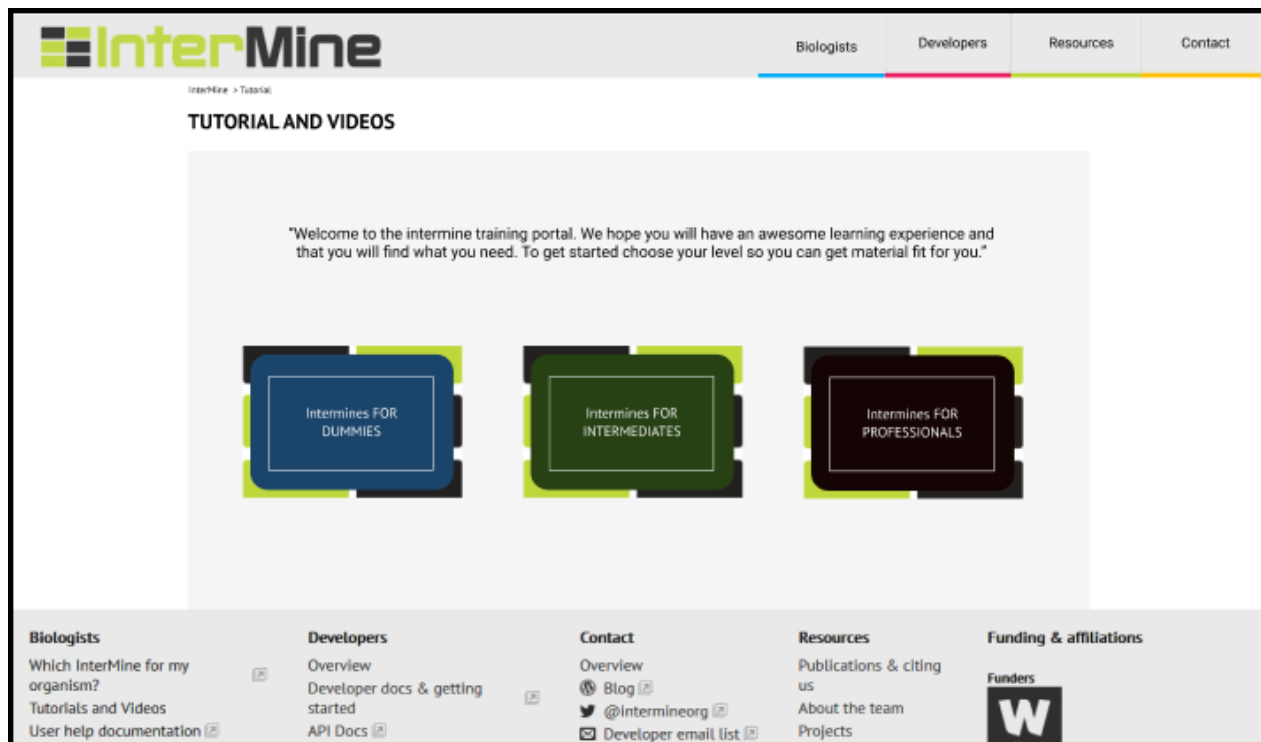
Contributions to InterMine

Here are my proposals as to how to improve the design and usability of the InterMine training Portal;

- we could separate the tutorials page in the general section according to levels. Like we could have tuto section for;
  .dummies
  .intermediate level and

  .advanced (where the pros can relate)😅
- now in every section especially for dummies, we should have tutos in the form of videos (preferably linked to YouTube), text and even links to eBooks (why not) so everyone can choose the learning style he or she prefers.

- and lastly why not add a life video chat section to speak with an expert (in case one is online) to get clarifications as to what a user is learning at the moment.
- Also a search window can be added to the website's footer so users could find easily what they are looking for (idea inspired by @roshni – discord ID)

Implementation

Proposed design for tutorial home page

Designed with Figma.com

Proposed Table of contents

This new table of content was developed by entirely exploiting the user documentation.

TABLE OF CONTENTS FOR DUMMIES

- **Getting started**

  - General Overview

- **Preliminary videos**

- Exercise1: Faceted Search
- Exercise2: Exploring a gene
- Exercise3: List Upload
- Exercise4: List Analysis Pages:
- Exercise5: Template searches
- Exercise6: Using template searches
- Exercise7: Query Builder
- Exercise8: Analysis workflows
- Exercise9: Region Search

TABLE OF CONTENT FOR INTERMEDIATES

Getting started

- General Overview

● **Cookbook of Examples: FlyMine**

- Gene Ontology
- Expression Data
- Pathways
- Regulatory data
- Orthologues
- Interactions

● **Keyword Search**

● **Report Pages**

- Report page navigation
- Summary
- Data displayers
- Interacting with report pages
- External links
- Lists
- Sequence information
- Sharing a report page

● **Lists**

- Lists
- List Upload
- List Analysis

● **Template Searches**

- What is a template search
- Finding the template search that you want
- Can't find what you want - please ask
- Running a template search
- How do I run a template search with one of my lists or a public list?
- Understanding your results
- Modifying a template search
- Building your own template search
- TroubleShooting

TABLE OF CONTENT FOR ADVANCED

Getting started

- General Overview

● Results Tables

- Understanding and navigating through the data
- Finding out more - links
- Column Summaries
- Apply a filter to your results
- Manage columns: Removing and rearranging columns from your results
- Manage columns: Adding additional columns of data to your results
- Manage columns: Changing the sort order of columns in your results
- Save a results set for further analysis
- Download a set of results
- Send results to galaxy
- Troubleshooting

● Query builder

- The Query Builder
- Advanced features of the query builder
- Troubleshooting

● Region Search

- Region Search Results
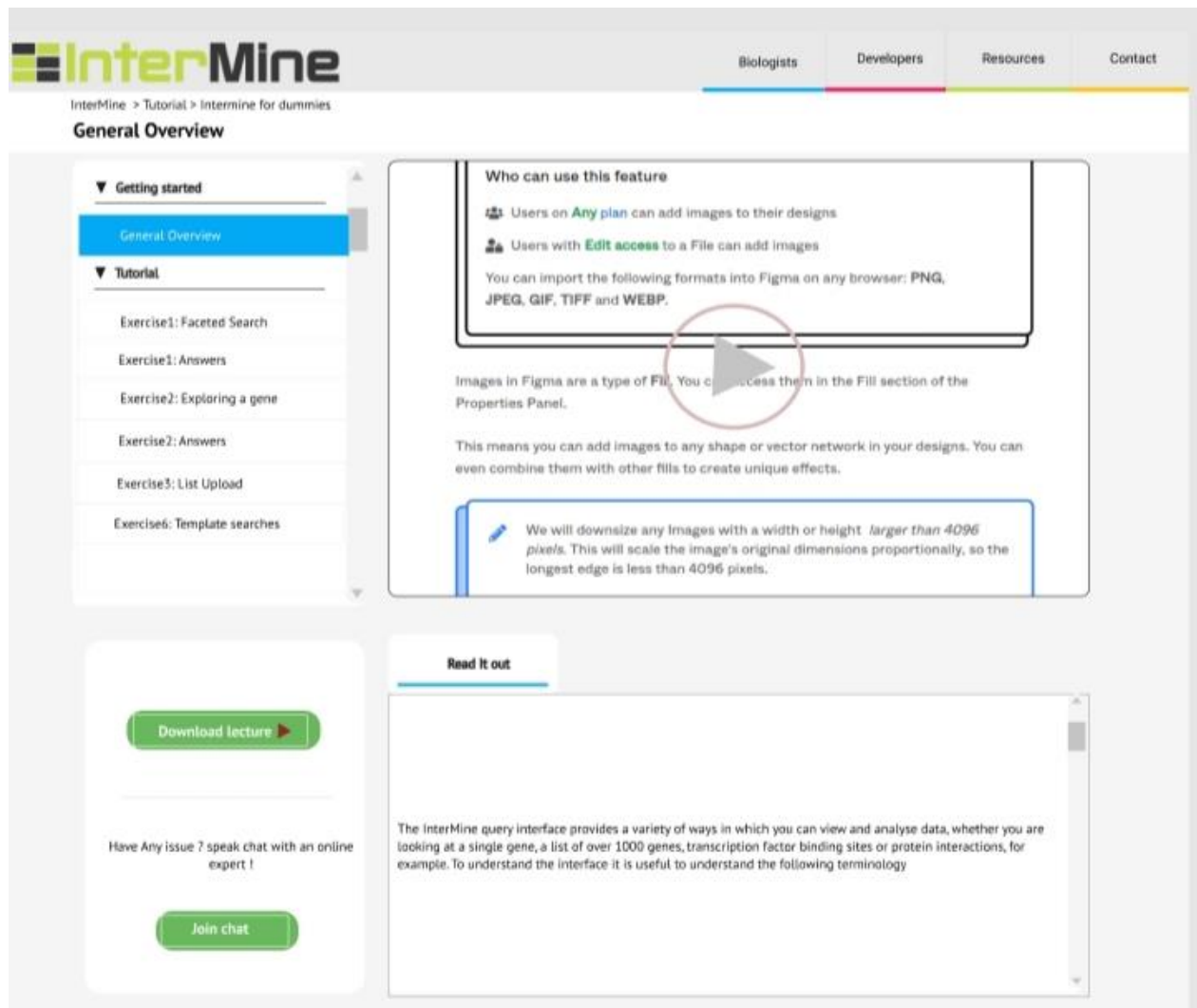- Troubleshooting

● MyMine

- What is MyMine?

- How do I create an account?
- Lists
- History
- Queries
- Templates
- Password
- Account Details
- Are my lists and searches stored permanently?
- What happens to my lists and queries when you make a new database release?

- **Data**

  - The Data tab
  - Data in the database

Proposed design for Video tutorial page

Proposed modification on footer

Designed with figma.com

Timeline (May 19th – August 18th, 2020)

Week 1 (From 19th to 24th May)
- Implementation of proposed designs.
- Producing Videos for:

Getting started

- General Overview

Week 2 (From 25th to 29th May)
- Producing videos for:

Preliminary videos

- Exercise1: Faceted Search
- Exercise2: Exploring a gene
- Exercise3: List Upload
- Exercise4: List Analysis Pages:

Week 3 (from 1st to 5th of June)
- Producing videos for:

- Exercise5: Template searches
- Exercise6: Using template searches
- Exercise7: Query Builder
- Exercise8: Analysis workflows

Week 4 (From 8th to 12th June)
- Producing videos for:

- Exercise9: Region Search

Getting started (InterMine FOR INTERMEDIATES)

- General Overview

Cookbook of Examples: FlyMine

- Gene Ontology

Week 5 (From 15th to 19th June)
- Producing videos for:

- Expression Data
- Pathways
- Regulatory data

Week 6 (From 22nd to 26th June)
- Producing videos for:

- Orthologues
- Interactions

Keyword Search

Week 7 (From 29th June to 3rd July)
- Producing videos for:

Report Pages

- Report page navigation
- Summary
- Data displayers

Week 8 (From 6th to 10th July)
- Producing videos for:

- Interacting with report pages

- External links
- Lists

Week 9 (From 13th to 17th July)

- Producing videos for:

  - Sequence information
  - Sharing a report page

<u>**Lists**</u>

  - Lists

Week 10 (From 20th to 25th July)

- Producing videos for:

  - List Upload
  - List Analysis

<u>Template Searches</u>

  - What is a template search

Week 11 (From 27th to 31st July)

- Producing videos for:

  - Finding the template search that you want
  - Can't find what you want - please ask
  - Running a template search
  - How do I run a template search with one of my lists or a public list?

Week 12 (From 3rd to 7th August)

- Producing videos for:

  - Understanding your results
  - Modifying a template search
  - Building your own template search
  - TroubleShooting

In case I finish earlier I will try to cover the table of content for professionals and produce downloadable material.

Apart from the above schedule, I will be:

- Blogging every week about my progress and internship experience
- Trying to increase visibility of InterMine YouTube videos and trying to make it reach its rightful users.

END OF INTERNSHIP