

User Manual

GenomePro 3.0 is a web application for processing genomic data files. The application runs online and can be addressed by <http://genomepro.cis.fiu.edu>. The following are brief, yet descriptive steps on how to successfully use the application.

Step 1: Accessing the Application

Access the internet on your mobile, desktop, or laptop device using your preferred internet browser. In the URL address bar of your browser, enter <http://genomepro.cis.fiu.edu>.

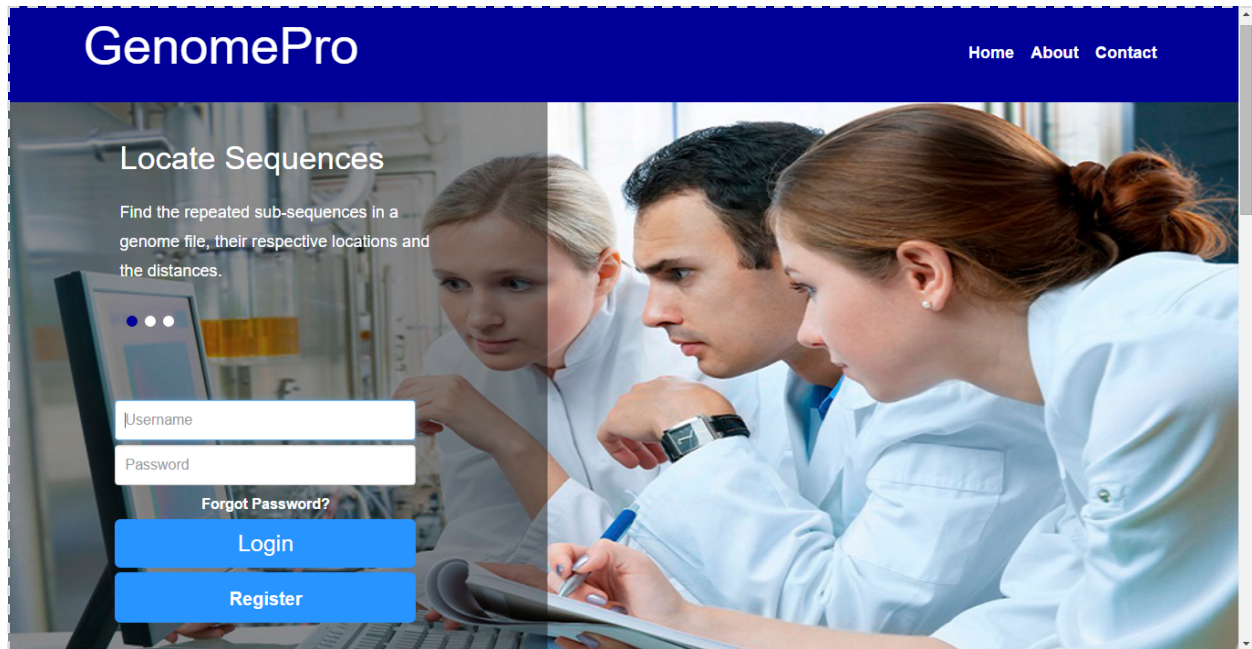


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Step 2: Accessing the Home Page

Once you have accessed the web site you should see the following home page:



You can scroll down to see more information about GenomePro 3.0 and navigate through the other pages: About and Contact. It is necessary to register an account with GenomePro in order to see and use the genomic data processing framework.

Step 3: Registering

You can register an account by clicking on the Register button which will redirect you to the registration page. After creating a new account you will need to confirm your email address by visiting your email and clicking on the link for account confirmation sent by the GenomePro administrator.

GenomePro

Home About Contact

CREATE AN ACCOUNT

Username*

Email*

Password*

Confirm Password*

First Name

Last Name

Register

[Already have an account? LOG IN](#)

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Step 4: Logging In

Once you have registered and confirmed your email, you can go back to the home page and enter your credentials in the login section on the left hand side of the page, redirecting you to the following page:

GenomePro Home About Contact Profile Tools Charts FTP Logout
Logged in as: dgonz293

GenomePro at a Glance

Finding Signatures
Creation of genome finger prints/signatures that are predictive and prognostic for specific biologic events or treatment outcomes.

Cancer Risk Prediction And Assessment
Confirmation of the presence of either new primary lesions or metastatic disease in all solid tumors, aiding in staging of cancer and treatments strategies.

Comparison
We offer our users the power to efficiently process genomic data files and to create results containing accurate information about the differences, similarities, and the analytics between genome files

Tracking Mutations
Tracking of HIV/TB mutational changes in patients, offering the possibility for new treatment paradigms.

Preventive Health Care Measures
Identification of sources and types of bacteria or viruses that spread in hospital or community settings.

New Diseases Cure And Prevention
Creating genetic finger prints libraries of known bacteria, viruses, and tumors, which are currently cured with known treatments or medications, will allow us to search for those finger prints in other genomes and apply the known cures to new diseases. These finger prints can also be useful to identify the source of drug resistance.

Our Audience

What Professionals Say About GenomePro

Michael Robinson

The ability to find similarities in multiple genomes is a tremendous tool offered by GenomePro. Not only you are able to visualize results with graphical comparison but you can also find out the presence of unique and/or repeated sub-sequences in your files to perform more efficient and robust analysis.

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Navigate through the other pages at your leisure: About, Contact, Profile, Tools, Charts and FTP.

Step 5: Editing your Profile

You can edit your profile by clicking on the profile link and changing your personal information.

GenomePro

[Home](#) [About](#) [Contact](#) [Profile](#) [Tools](#) [Charts](#) [FTP](#) [Logout](#)

Logged in as: dgonz293

Welcome

Daniel Gonzalez



Choose File

 No file chosen

Upload Photo

Member Since: 01-31-2016

Jobs Submitted: 15

Update Your Profile

dgonz293@fiu.edu

Password

Confirm Password

Daniel

Gonzalez

Enter a description here...

Update

Pending Jobs

You have no pending jobs. You can view your most recently completed jobs below.

The system will automatically send you an **email confirmation** to the email you provided notifying you of the changes you made.

Step 6: Contacting the Administrator

You can also contact GenomePro admin concerning questions or comments by clicking on the contact page.

GenomePro Home About Contact Profile Tools Charts FTP Logout
Logged in as: dgonz293

Contact Us

Contact Form

NAME *

EMAIL ADDRESS *

SUBJECT *

MESSAGE *

Send

Address

Florida International University,
Modesto Campus - Miami
USA
Phone: 305.999.9999
Fax: 305.888.8888

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The contact form is very straightforward. **All the fields are required:** Name, email address, subject and message.

Step 7: Using the Tools

Click on the tools link to access the tools page. The first step to start using the tools is to upload files into your account so that you can use them for processing the tools. When uploading a file, it will be sent to server for validation. You will be notified via email when the file has been validated and if it is ready to be used. The file validator is a program that verifies whether you have submitted a good file (DNA, RNA or Protein) or a bad file (any other unsupported file type). The program will automatically detect what type of file you submitted and group them accordingly to their types. In other words, if you submitted a DNA file, it will be grouped in the DNA tab. If you don't know the data type of your genome file, simply upload it to the server and the validator will verify this information for you.

After you have uploaded your files, you can submit jobs using a single tool for single files or multiple tools for multiple files. For example, if you want to clean your FASTA or FASTQ file, you can select the Extract Fasta/Fastq tool and select a file from the file selector. You will notice a new field appear to enter the length of the sub-sequences you would like to be extracted from your file. More information about how to use each tool can be found in the tools description and tools helper section at the bottom of the tools page. If, after selecting a tool or file, you would like to unselect it, simply click it again. You can use command or shift to select multiple tools and files at once.

Some tools, such as the extract tool, generate result files such as sorted sequences and maps that will be later grouped in the map tabs for you to use to create charts or as input for other tools.

You can also find a table listing all of the jobs you have submitted on your Profile picture by scrolling towards the bottom of the page.

GenomePro

[Home](#) [About](#) [Contact](#) [Profile](#) [Tools](#) [Charts](#) [FTP](#) [Logout](#)
Logged in as: dgonz293

Submit a Job

Select tool

Genome Signatures
Repeated Sequences
Genome Probes
Unique Sequences

Select files

DNA files:
201602011319_fasta.bt
SORTED:
201602011319_fasta.bt.sorted

Submit

Upload Files To Your Account

Choose File

no file selected

Clear

Upload

Tools Description

Tools Helper

FAQ

Genome Signatures : Choose multiple genome files and see the differences between them, including what is contained in one that isn't contained in the other. The time it takes to complete this job depends exponentially upon the number of files involved.

Repeated Sequences : Run this tool on any valid genome file to view the repeated sequences contained within the file. Because of the complexity of the software, the bigger the file, the longer the processing time to complete the job. Please be weary of this when selecting this job to run on your file.

Genome Probes : This tool will tell you if your probes (sequences) are present or not in your genome files. It will also give you information such as how many times the probes appear and in which lines they are located.

Unique Sequences : Run this tool on files from your map source to verify the existence of unique sequences within the file.

Extract Fasta/Fastq : The extract tool takes any file in FASTA or FASTQ format and extracts sub-sequences of specific length given by the user. You can choose to extract only, extract and sort by alphabetical order, or extract, sort, and generate a map.

Sort Sequences : This tool can sort data in alphabetical order. It can only be used on EXT formatted files that are created by using our extract tools.

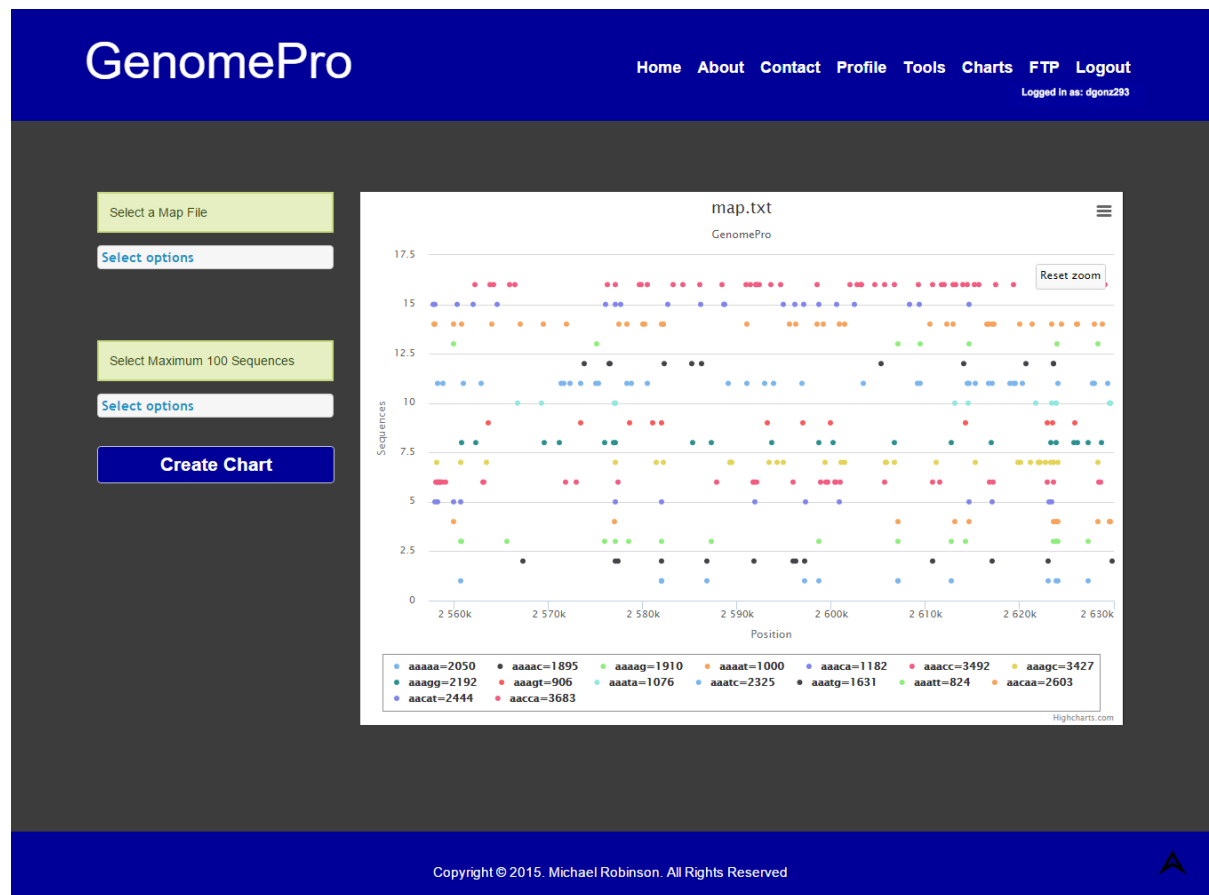
Generate Maps : This tool generates maps.

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Step 8: Generating Charts

Click on the charts link to access the Charts Page. This feature is to create charts from map files that were generated from the extract and sort tools. In this page you will see a sample chart on the right side to exemplify what you will get as a graphic visualization of the sequences from your genome file. Each dot in the graph represents a sequence. The X-axis contains the locations where the sequences are repeated in the genome file.

To generate charts simple choose a map file from the first selection box and the desired sub-sequences from that map file that you want to be displayed in the chart. Click Create Charts button to generate the chart. After generating your chart, you can also zoom in a specific area of the chart by drawing a square/rectangle area with your mouse over the chart area so that you can visualize the sequences in a better way. On the top right hand corner you have the options to download the chart in PDF, JPG, PNG or even print the chart.



Step 9: Navigating the FTP page

Click on the FTP button to access the FTP page. This page contains information about all your uploaded files as well as your result files and jobs submitted. As an added layer of security, you will be asked to enter your credentials to access this page. Enter the same username and password used for logging into the site.

If you click on the Uploads Folder, you will have access to the Details folder which contains information about your uploaded files such as how many bases it has and the corresponding percentages of each base in relation to the entire file. This is the folder you want to look at and find out why any of your file might have been tagged as bad file (invalid file or unsupported type). Some examples of this situation are files that contain garbage data or empty files.

The results folder contains a list of all your job submissions with subfolders organized from the most recent job submission to the oldest ones.

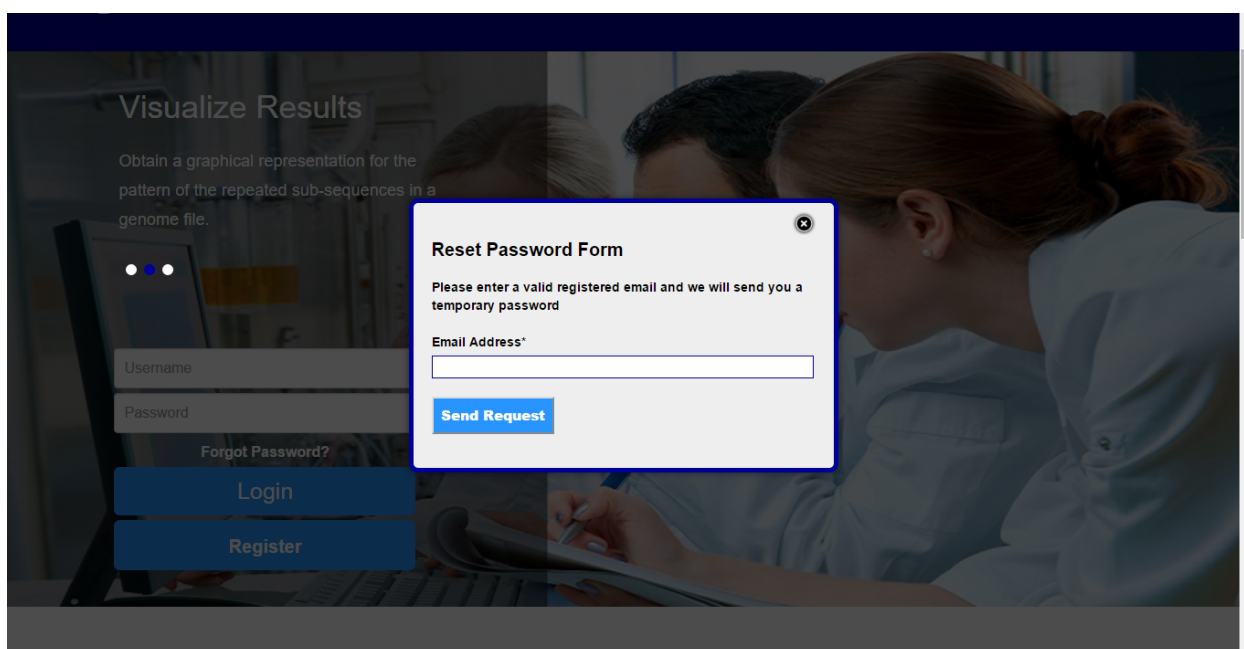
GenomePro

Name	Last modified	Size
 Parent Directory		-
 201604191754_369/	2016-04-19 17:54	-
 201604191754_368/	2016-04-19 17:54	-
 201604191721_367/	2016-04-19 17:21	-
 201603071555_337/	2016-03-07 15:55	-
 201602282325_336/	2016-02-28 23:25	-
 201602282251_335/	2016-02-28 22:51	-
 201602280328_334/	2016-02-28 03:28	-
 201602142214_330/	2016-02-14 22:14	-
 201602120136_329/	2016-02-12 01:36	-
 201602120136_328/	2016-02-12 01:36	-
 201602120135_327/	2016-02-12 01:35	-
 201602120134_326/	2016-02-12 01:34	-
 201602011329_321/	2016-02-01 13:29	-
 201602011327_318/	2016-02-01 13:27	-
 201602011320_316/	2016-02-01 13:20	-

Step 10: Resetting your password

In case you forget your password, you can submit a temporary new password using the forget password feature. Click on the home page and click on the Forget Password link in the login.

A popup screen will appear asking you to input a valid registered email. Enter your email and click the Send Request button. You should receive an email with your new temporary password. We recommend that you change your temporary password as soon as possible.



Step 10: Logging Out

If your account is left inactive for long period of time, it will be logged out of the system, as an added security feature. You can always log out by clicking on the logout button on the top right hand corner of the page.

Step 11: Questions and Concerns

Contact the administrator using our contact form.