Josh and Stefan Team Project

A look into our genome application shows a step into the genetics field. Our project takes online data and website information to give a user a look into genes and their attributes. The world of genetics is a swiftly growing field with many avenues of discovery, here we have defined a path and have created a more accessible source for searching for genetic information. The world of genetics truly is growing but it is held back by the lack of software to test, parse, and search the many long lists of genome data.

Our project focuses on RSIDs as a source of information. Each living thing has a set of DNA that is extremely long. The RSIDs in our files are subsets of that immense amount strings that show distinguishable traits instead of the “Junk DNA” or the DNA that creates parts of people, animals, or plants that are the same among all things. The RSIDs in the Human Genome Project refer to groups of SNPs in different test subjects. These are particularly useful in distinguishing people and species.

“The Genome Buddy” As our front page, brings a user into a site of exploration. Here, a user can sign up or directly search for RSID information. The search must be a 7 digit number denoting the RSID you would like to know about. The results are run below and various useful information bits are shown such as genome, allele, Type, and more. The benefit of signing up and signing in as a user is that past searches are saved to that model.

Our “About” page illustrates live data in that it displays recent news from *Medical News Today — Genetics.* This updates on website activation. Here you can watch and be inspired by up and coming technology, advancements, and pursuits. Additionally we have a “Help” page to tell the users how to go about using our site and how to work the search option.

The Genome Buddy project uses information and data from the Human Genome Project as well as the National Center for Biological Information to display and use our information. The tests we made can be viewed by running — $ rails t — and show a large group of tests testing the site pages and their attributes.

This project compiles a host of gene information from separate reaches of the internet and truly, the beauty of this application is in the back end. We spent the bulk of our time creating workable code that can parse, read, and deliver an application with usability.

Ruby on Rails Gene Buddy Application

Getting started

To get started with the app, clone the repo and then install the needed gems:

$ bundle install --without production

Next, migrate the database:

$ rails db:migrate

Finally, run the test suite to verify that everything is working correctly:

$ rails test

If the test suite passes, you'll be ready to run the app in a local server:

$ rails server