**Sha Ni**

likenisha2014@gmail.com/sha.ni@tufts.edu

Apt1,No.22,PowderHouse Blvd,somerville,MA

phone number: 8574006271

**EDUCATION**

**Tufts University**,Medford,MA

Master's degree in bioengineering,bioinformatics track, May,2014.

GPA 3.22

**Sun Yat-sen University**, Bachelor's of Science in biotechnology. graduated on May 2012.

**COMPUTER SKILLS**

Software: visual studio, eclipse(android,swings and awt), notepad++, sublime, MAMP,

dreamweaver.etc.

Programming Language: java, HTML, CSS, Javascript, Perl, PHP, Mysql,C++, ruby and python(know a little about script language).

other skills: linux commands, git commands, heroku, wordpress/buddypress knowledge, ruby on rails.

**RELEVANT COURSEWORK**

Data Structure ; Algorithms; Computational biology; web engineer; Programming in java UI design; probability;

**EXPERIENCE AND PROJECT**

1.internship at Amrap4life.com

* use jquery, css and PHP to improve functions of the website and increase UI feelings. I used to wordpress and buddypress, at the same time, I am used to git commands and also linux commands.
* test others codes and used to the process of deploying and the way to maintain a website.

2.prediction protein function by motif

* implement peptide pattern recognition algorithm.(two version: one for GH5, small amount of data,118 sequences and one for large amount of data, even more than 8000 sequencs).
* implement a Perl program to download sequences data from NCBI and cluster GH family proteins.
* design two methods to predict proteins function based on peptide pattern recognition. implement them and test them with GH5 family sequences.
* improve PPR algorithm by adding some effective steps for choosing sequences from large size of data. Lowering running intensity without affecting PPR accuracy. Testing GH61 and GH13 sequences with the modified algorithm.

3.implement two classic SAT algorithms

* implement Davis Patum and WalkSat algorithm.
* testing the running time and accuracy of finding solution of SAT. Compare them on both perspective.

4.prediction disease according to gene expression data

* implement k-nearest neighbor algorithm to find the neighbors of the tested samples and predict disease.
* testing the prediction accuracy according to the number of neighbors.
* implement UPGMA-liked cluster algorithm to cluster whole set of samples and predict tested sample disease status according to the cluster result.

5.analyze the SNP data

* implement a program to testing SNP results data. Count the transition and transversion number.
* calculating ratio of ti/tv for known passing SNPs, novel passing SNP,s novel filtered SNPs, novel filtered SNPs. And compare them, find differences.

6.build a message center

* using ruby on rails to build a message center, first use model files to build user data model and migrate the data table.
* Then, use the controller to build index/create/show methods. index get all the data from database, create method create new message and store it to database. Finally, show method can show the single method. I configured url at routes.rb(e.g set root to main page and show individual message by its id).
* Also the two view pages, one for all messages, one for individual. They can direct to each other.
* Then I use AJAX to set check the messages every 10 seconds to see if there are new messages, if yes, I post the new messages at the front without refreshing the pages.
* Also use timeago plugin to transfer time when message built to timeago format.
* This message center can receive JSON format information.(e.g using curl command to call create method).

7.implement java UI

* implement a radar system UI. I used eclipse(java) to build the system. This system has one screen to show all kinds of ships and one controller that contains three other controllers. They can add ship, configure animation(moving) of ship and also change background color, etc.
* Here I am very familiar with swing and awt bags. Some common tools for swing bag: JComponent, JButton, JComboBox,JTextField,JCheckBox, etc. Some other tools for awt bag: Color, all kinds of Listener, all kinds of Events, all kinds of Layouts, etc.

8.implement an android application:

* implement an android application that can send the messages to the messagehub(remote server) and get the message from the messagehub and show in id decrease order.

9.internship at CHT4.com

* using dreamweaver to design web page for CHT4.com

**INTERESTS**

Design website and Application(java)

basketball and table tennis

cartoon, movie and music

skating, skiing.

**Personal Information:**

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[C:\class\work\Icons\Categories-preferences-desktop-personal-icon.png](http://www.eecs.tufts.edu/~sni01/index.html) personal page (right click and open hyperlinked)