MINGZHAO LIU

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github.com/mliu2

SUMMARY OF SKILLS

Programming knowledge in **C**, **C#**, **C++**, **Java**, **Python**, **Perl**, **SQL**, **MongoDB**, **HTML**, **JavaScript**, **LISP**, **Prolog**, and **R**

Experienced in working with **Rosetta** protein modeling suite

Experienced in working with **Git** and **Mercurial** distributed version control systems

Experienced in working in **Windows** and **Unix** environments

Effective presenter, communicator, writer, and public speaker

Fluent in Mandarin Chinese

Working knowledge of French

EDUCATION

Ramapo College of New Jersey – Mahwah, NJ

Bachelor of Science: Bioinformatics, May 2016, *Magna cum laude*

Bachelor of Science: Computer Science, May 2016, *Magna cum laude*

RESEARCH EXPERIENCE

A Bioinformatic Approach to Investigate a Relationship between Cis-Regulatory U-Rich and G-quadruplex Motifs Involved in Mammalian Polyadenylation

School of Theoretical and Applied Sciences – Ramapo College of New Jersey

Undergraduate Researcher, Jan. 2014 – June 2016

Developed genome-wide analysis tools using Java, JavaScript, C++, and Python to map the location of selected sequence motifs

Performed semi-global alignments of sequence data using EMBOSS-Needle

Developed a program to determine conservation of U-rich sequence motifs within a database

Extracted and stored nucleic acid sequence data and annotations using a NoSQL database

Literature research to determine and characterize sequence motifs

Presented research project at Student Research Symposium

Presented research project at MACUB conference

Presented research project at RNA Conference 2016 in Kyoto, Japan

Marburg Virus Antibody Modeling using Comparative Modeling

Center for Structural Biology – Vanderbilt University & RosettaCommons

Developer of Rosetta, powerful macromolecule structure prediction and design software

Research Intern, May. 2015 – Aug. 2015

NSF funded research internship through RosettaCommons

Familiarized with the Rosetta protein modeling suite

Benchmarked the efficacy of comparative modeling techniques

Developed a protocol to model antibody structures using comparative modeling

Performed score vs RMSD analysis on models

Presented Research at RosettaCON

WORK EXPERIENCE

Equal Opportunity Fund – Mahwah, NJ

Student Instructor, June 2014 - August 2014

Attend lectures for selected SI course.

Conduct SI Sessions on test preparation, note taking, and study methods and lead review discussions on daily lectures.

Facilitate evening study sessions as part of the EOF Pre-Freshman Study Institute.

Attend weekly staff meetings.

Coordinate SI evaluation process.

Maintain SI session attendance logs.

Conduct academic study skills workshops.

Facilitate summer reader workshop

Alexander Biener, MD – Woodcliff Lake, NJ
Intern, Feb. 2015 – Dec. 2015
Analyze data collected from health studies
Digitize informational pamphlets for electronic distribution
Research HIPAA compliant solutions for remote access
Provide IT support for the office