WE SEEK MOTIVATED STUDENTS WHO ARE EXCITED TO GAIN RESEARCH EXPERIENCE IN THE NEWLY DEVELOPING FIELD OF BIOINFORMATICS. WE USE COMPUTATIONAL METHODS TO UNDERSTAND MASSIVE GENOMIC DATASETS AND IDENTIFY BIOLOGICAL SIGNALS EMBEDDED IN THE NOISE. WE ARE FOCUSED ON QUESTIONS RELATED TO STRUCTURAL VARIATIONS INCLUDING TRANSPON ACTIVITY IN THE GENOME, AND ITS PHENOTYPIC AND EVOLUTIONARY CONSEQUENCES, BUT OPEN TO OTHER IDEAS AS WELL. SEVERAL CURRENT PROJECTS ARE LISTED BELOW.

1. Transposable element activity in somatic cells
2. Evolutionary constraint on insertions and deletions.
3. Classification of tissue-origin using DNA methylation patterns

The students working in our lab usually continue to work for multiple years until graduation. In addition to having fun in the lab, the skill you gain in bioinformatics are readily transferable to any other data-intensive field. After graduation, our lab alumni have moved on to great opportunities, such as, graduate program at U. Penn, Penn State, Medical School at Duke, Amazon, etc.

Roles and Responsibilities
You will participate in all aspects of the projects based on your skill levels, including
1. Devising a smart way to retrieve large amount of data from databases
2. Developing pipelines consisting of existing bioinformatics software to extract relevant information from the data
3. Modifying existing software or developing new software to provide novel solutions. For example, see http://github.com/HanLabUNLV
4. Full gamut of statistical analyses, ranging from exploratory data analysis, linear models, classification/clustering, or modern machine learning methods.
5. Discussion and interpretation of data and writing the report.
6. Presentation of study at different public venues.
Education and Qualifications
We look for students who can commit 15~20 hours a week of work, who are good at programming in at least one language (preferably python or C/C++), and comfortable with the linux environment. You are also a curious person with interests in biology.

Preferred Skills
● Programming

How to Apply
If you are interested please send me an email, including your CV, unofficial transcript, and some examples of your code to mira.han@unlv.edu