**Xinyi LIN**

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**Education**

**Columbia University** | New York, United States of America

***Master of Science in Biostatistics***

* GPA: 3.91709.2018-Now

**Sun Yat-sen University** | Guangzhou, China

***Bachelor of Science in Biological Science and Statistics***09.2014-06.2018

* GPA: 3.8/4.0
* Awards: Second Class Scholarship in 2015-2016; Third Class Scholarship in 2014-2015 & 2016-2017
* Main Courses: Cell Biology, Biochemistry, Genetics, Ecology, Microbiology, Biostatistics, Advanced Mathematics
* Self-learned Courses: Probability Theory and Statistics, Discrete Mathematics, Geometry and Algebra, Operation Research, Mathematical Analysis, Advanced Language, Data Structure and Algorithms
* Related Skills: C++, Python, SPSS, MATLAB, R, Oracle, Linux

**Research**

***Methylation of the* N6 *Position of Adenosine (m6A)***

Bioinformatics Lab, School of Life Sciences, SYSU 09.2017-06.2018

Role: Research Assistant; Supervisor: Prof. Jian Ren

* Build an analysis platform to study the allele-specific of m6A, abnormity of which may result in critical illness
* Cooperate with a cancer center to collect large amount of data from cancer patients
* Use statistical and modeling methods together with massive data analysis to figure out whether m6A is more likely to happen in certain alleles
* Predict the most possible position of m6A and provide valuable suggestions to biologists for further research

***R Square***

Southern China Center for Statistical Science, SYSU 05.2017-06.2018

Role: Key Member; Supervisor: Prof. Zhenshun Lin, Prof. Xueqin Wang

* Develop capacity of [mathematical modeling](http://dict.youdao.com/w/mathematical%20modeling/#keyfrom=E2Ctranslation), programming as well as data processing through plenty of case analyses mainly based on R and Python
* Conduct data pre-processing, cleaning and labeling before analysis procedure under the guidance of theories concerning statistics, programming and mathematics
* Make a report for each data analysis case to present the research findings

***C++ Program***

School of Mathematics, SYSU 02-07.2017

Role: Programmer

* Wrote a program with C++ to show the campus plot of SYSU, including dormitory, teaching building, canteen, research institute, office building and so on
* Utilized the idea of graph theory; obtained the shortest path with Floyd algorithm between two sites; built a model for site selection and route query according to different coefficients
* Picked the optimized location for a new teaching building, taking distances with other buildings and students’ frequency to the new building into consideration

***Dominance Style of Macaca Mulatta in Nanwan Monkey Island***

Primates and Human Evolution Lab, SYSU 04-10.2016

Role: Chief Researcher; Supervisor: Prof. Peng Zhang

* Collected thousands of pieces of behavioral data of *Macaca Mulatta* with camera in Nanwan Monkey Island
* Utilized Excel and Socprog (an app to analyze dominance style of macaque) to calculate the frequency of certain behaviors and deduce the specific dominance style of the targeted macaque group
* Carried out statistical analysis based on R, using non-parametric test to determine whether there are significant differences in the two sets of data acquired from two groups of *Macaca Mulatta*

***Analysis of Seating Distribution in Sun Yat-sen University***

School of Life Sciences, Sun Yat-sen University 03-05.2016

Role: Key Member; Supervisor: Prof. Miao He

* Interviewed hundreds of students for data collection
* Used statistical methods (mainly ratio calculating and analysis of variance) to research on the seating distribution of classrooms of the public teaching building, SYSU
* Revealed the relationship of classroom patterns with students’ academic performance to put forward suggestions on classroom planning and students’ choice of seats

***Case Study of Daphniphyllum, Styrax Confuses and Corylopsis Sinensis in Bamian Mountain***

Tropical and Subtropical Plants Resources Lab, SYSU 07-09.2015

Role: Chief Researcher; Supervisor: Prof. Wenbo Liao

* Researched on the biological community of Jinji Woods in Jiangxi Province and Bamian Mountain in Hunan Province; studied the plants evolution and climate change based on plants’ growing conditions
* Designated 11 temporary quadrats including areas of 400m2, 600m2, 800m2, 1600m2 and 3600m2; measured the categories, trunk width, height, crown diameter of all plants covered
* Selected the quadrat of 1600m2 as final research sample; analyzed on species-area curve, species diversities, biomass, hierarchical structure and dynamic variation

***Investigation of Insect Diversity in Changbai Mountain***

Tropical and Subtropical Forest Ecosystem Experiment Center, SYSU 01-10.2015

Role: Chief Researcher; Supervisor: Associate Prof. Xubing Liu

* Used the sweeping method and light trap to successfully collect 1119 (45 families, 139 species) herbivorous insect examples and brought back to lab for study
* Adopted Excel and SPSS to calculate the specie richness and Shannnon-Wiener Diversity Index (H′)
* Learned the relationship between insects and environment; better understood the host-specificity of herbivorous insects; put forth theoretic basis for the protection of insect diversity in this area

**Practical Experience**

**Intern, Bao’an Hospital of Chinese Medicine, Shenzhen**  07-08.2017

* Recorded the situation about diabetes and hypertension for the elderly, vaccine injections for newly born babies, and epidemic diseases in the 5 affiliated community health service centers
* Examined the public health services mainly for the aged above 65 year-old, pregnant and newly born babies
* Offered assistance to government departments for the supervision and regulation of these health service centers

**Key Member, The Interdisciplinary Contest in Modeling**  01.2017

* Established a model to assess whether a city meets smart growth with Analytic Hierarchy Process (AHP)
* Chose two cities (Sydney and Yantian in Shenzhen City ) as experiment objects, and predicted their future development tendency; conducted sensitivity tests to judge its stability and validity
* Composed a thesis “A Model of Sustainable Smart Growth to Evaluate and Plan smart growth of a City”, and won Honorable Mention

**Team Leader, School of Life Sciences, SYSU**  04-10.2016

* Had a two-week field trip to Heishiding Nature Reserve and Daya Bay of Guangdong Province
* Learned to recognize more than 200 kinds of plants, made close observations and took careful notes
* Studied the characteristics and features of fish, birds, amphibians and reptiles

**Vice President, Student Union, School of Life Sciences, SYSU**  05.2015-05.2016

* Was responsible for the basic operation and management of Academic Department and PR Department
* Organized many school activities as the people in charge, including “SUSY Cutting-edge Lecture”, “Lab Tour”, “Biology Festival”, “Biology Experiment and Skills Contest”, etc.
* Improved personal capacity, leadership, organizational skills, team spirits

**Honors**

* Champion in “Bio-Debate” Competition (College Level)
* First Prize in Freshman Debate Competition (University Level)
* First Prize in School Singing Contest (Member of School Chorus)
* “School Reading Star” Award (University Level)
* “Best Planner” in School Planning Contest (College Level)