

Xinyi LIN

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Education

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

Columbia University | New York, United States of America

Master of Science in Biostatistics

09.2018-Now

Research

Methylation of the N6 Position of Adenosine (m^6A)

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 m^6A , abnormality of which may result in critical illness
- ◆ Cooperate with a cancer center to collect large amount of data from cancer patients
- ◆ Enrich the database through other sources such as biomedical information platform or former studies
- ◆ Use statistical and modeling methods together with massive data analysis to figure out whether m^6A is more likely to happen in certain alleles
- ◆ Predict the most possible position of m^6A 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, programming as well as data processing through plenty of case analyses mainly based on R and Python
- ◆ Conduct data pre-processing, cleansing 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 可以不用加 S
- ◆ 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)