Gaotong (Gloria) Liu

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EDUCATION

Columbia University, Mailman School of Public Health — New York, NY
Master of Science (MS) in Biostatistics, (Theory and Methods track), Cumulative GPA: 4.1 — Expected May 2021
- Related courses: Data Science(A), Biostatistical Methods(A_+), SQL

The University of Hong Kong, Visiting Program — Hong Kong
- Related courses: Marketing analytics, Statistical inference and Python programming — Sep - Dec 2018

The Hong Kong Polytechnic University — Hong Kong
Bachelor of Science (BS) in Applied Biology with Biotechnology, GPA: 3.94/4.0 — Sep 2014 - May 2018
- First Class Honors

The University of Queensland, Exchange Program — Brisbane, Australia
- Related courses: Genomics & Bioinformatics and Biostatistics — Jan - Jun 2017

RELEVANT RESEARCH EXPERIENCE

Columbia University, COVID-19 DSCovR Dashboard — New York, NY
Research Assistant, Dr. Shing Lee's supervision — May-Sep 2020
- Collaborated on design and launched 5 sections of COVID-19 Rshiny data visualization tool for 200 max users per day to visualize and compare time trends and demographic information across the United States
- Participated in data collection, scraping, cleaning and data quality check from 52 individual state department of health website using R
- Successfully designed and developed 51 state demographic visualizations and created policy timeline visualizations for around 1000 policies
- Successfully applied meta-analysis random effect model to analyze 8 types of comorbidity data for COVID-19 case and death and prepared manuscript on comorbidity and COVID-19 cases and deaths

The University of Hong Kong — Hong Kong
Market Research Assistant, Dr. Kwan CW's supervision, STAT 3613 Marketing analytics — Sep - Dec 2018
- Successfully applied multidimensional scaling, marketing response model and correspondence analysis to the survey data to predict product market size, and profit

Shenzhen Institutes of Advanced Technology, CAS — Shenzhen, China
Research Intern, Dr. Yin Peng's group, Research Center for Biomedical Information Technology — Aug 2018
- Effectively analyzed gene expression data by differential expression analysis and GO, KEGG enrichment analysis using R packages to investigate the effectiveness of a drug
- Studied R, Python programming and various algorithms applied to GWAS, TWAS

LABORATORY SCIENCE RESEARCH EXPERIENCE

The Hong Kong Polytechnic University, Department of Applied Biology and Chemical Technology — Hong Kong
Final Year Student/Student Assistant, Prof. Wong Man sau's group — Feb 2016 – May 2018
- Efficiently used bioinformatical tool based on R to analyze RNA-sequencing data, mainly using differential and enrichment analysis and narrowed down to 20 targets for research of Icariin's effect on osteoporosis
- Investigated molecular mechanisms of the Icariin's effect on apoptosis and cell proliferation of osteoblast using techniques such as flow cytometry, Real-time PCR, cell culture (MC3T3-E1), MTS assay, Western Blot

Shanghai Institute for Biological Sciences, CAS — Shanghai, China
Research Intern, Prof. Hu Ronggui's group, Institute of Biochemistry and Cell Biology — Jun-Aug 2016/Jul-Aug 2017
- Obtained the chemicals which can influence E3 ubiquitin-protein ligase in the retinoic acid signal transduction with a statistical significance, using immunoblotting, immunoprecipitation and DNA cloning
- Accurately followed research protocols and conducted high-throughput screening of chemicals on retinoic acid signal transduction by the dual-luciferase reporter assay

SKILLS

Languages: Native in Mandarin, Elementary in Japanese, Basic in Cantonese
Computer Skills: Proficient in Microsoft Office (Word, Excel and PowerPoint), and R, advanced knowledge of RShiny, also knowledge of Tableau, Python, SQL, SAS and Machine Learning