Yunlin Zhou

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EDUCATION

Mailman School of Public Health, Columbia University **New York, New York**

Master of Science in Biostatistics 05/2023

- Courses: Probability, Statistical Inference, Data Science I & II (R programming), Biostatistical Methods I & II, Relational databases and SQL programming, Analysis of Longitudinal Data, Statistical Methods for Casual Inference, Statistical Computing With SAS, Deep Learning in Biomedical Imaging
- **Thesis:** *Impact of Amazon Fulfillment Centers on PM2.5 Levels in Surrounding Areas.*

College of Biological Sciences and Technology, Beijing Forestry University **Beijing, China**

Bachelor of Science in Biological Sciences 07/2021

- Core Courses: Biotechnology, Advanced Mathematics, Cell Biology, Molecular Biology, Animal Physiology A
- **Thesis:** *Molecular mechanism research of the effect of leaf on chloroplast division in woody plants.*

UC Berkeley Summer Sessions 07/2019-08/2019

- Courses: Introduction to Probability and Statistics in Biology and Public Health, Introduction to Human Physiology Laboratory

DATA ANALYSIS PROJECT

Biostatistics Department, Data Science I Fall 2021

- Explain World Happiness project
- Collaborated with a team of 3 to conduct analysis of World Happiness data set, created data visualization and built a website using R.

Biostatistics Department, Biostatistical Methods I Fall 2021

- Compared (name variables) in collaboration with 4 students to examine the marginal distributions and pairwise relationships between variables, then built the final model of crime rate data set using R.

Biostatistics Department, Data Science II Spring 2022

- Conducted analysis of CVD data set, used logistic, GAM, MARS, LDA and QDA models.

Biostatistics Department, Relational databases and SQL programming Spring 2022

- Trained with Access and MySQL to process database with immune disease data analysis project.

Columbia Biostatistics Department, Statistical Computing with SAS Fall 2022

- SAS analysis of the 'weight_loss' data set explores factors influencing overall weight change in patients receiving weight loss treatments, utilizing linear and logistic regression, and descriptive statistics.

Biomedical Engineering Department, Deep Learning in Biomedical Imaging Spring 2023

- Developed a U-Net neural network based on the TABS model for automatic segmentation of the human inner ear in micro-CT scans, enhancing treatment strategies for inner ear diseases.

SKILLS

- Data analysis Skills: R, Python, SQL, MySQL, SAS, Access
- Lab skills: Proficiency in molecular biology techniques
- Language: Chinese (native), English (fluent)

RESEARCH EXPERIENCE

Research Assistant, Beijing Forestry University 10/2017-07/2021

Advisor: Prof. Hongbo Gao & Prof. Xiaomin Liu

The Putative Smallest Introns in The Arabidopsis Genome

- Conducted research on DNA in plants using molecular biology techniques, including assessment of functions of introns, resulting in a research publication.
- Accurately followed research protocols to ensure accuracy and validity of data collection.
- There is a limit to how small introns in *A.thaliana* can be, which is useful for the understanding of the evolution of small introns.

Molecular Basis of The Effects of Leaf Development on Chloroplast Division in Woody Plants

- Review previously written articles on topic, to provide information for future research.

Research Assistant, Columbia University 01/2023-04/2023

Advisor: Prof. Kara Rudolph

Impact of Amazon Fulfillment Centers on PM2.5 Levels in Surrounding Areas

- Investigated the impact of Amazon's fulfillment centers on surrounding areas' PM2.5 levels through the implementation of synthetic controls with staggered adoption, complemented by the incorporation of Rural-Urban Commuting Area Codes (RUCC) score as an auxiliary covariate.

PUBLICATIONS

- Cheng W, **Zhou Y**, Miao X, et al. The putative smallest introns in the *Arabidopsis* genome. *Genome biology and evolution*, 2018.
- Liu X, **Zhou Y**, Xiao J, et al. Effects of chilling on the structure, function and development of chloroplasts. *Frontiers in Plant Science*, 2018.

HONORS & AWARDS

- Outstanding Academic Scholarship of Beijing Forestry University (for 2017-2018 / 2018-2019 academic years)
- Excellent Student Cadre (for 2017-2018/2018-2019/2019-2020 academic years)
- Outstanding Cadres of Student Association (for 2017-2018 academic year)
- Outstanding Individuals in Social Practice (for 2018-2019 academic year)
- Prize for The Best Organization (for 2018-2019 academic year)
- The fifth biology competition Beijing China Knowledge competition Second prize (2019)
- The sixth biology competition Beijing China Experimental skills competition Third prize (2020)