Yihang Zhou

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Dual Ph.D. Students in Biomedical Sciences and Bioinformatics Sciences with 10+ academic projects experience. Spending years tackling scientific and engineering problems using interdisciplinary knowledge and skills.

Education

2019.9-now **Biomedical Sciences**, Ph.D. Auburn University, Auburn, AL, U.S.
2018.9-now **Bioinformatics Sciences**, Ph.D. Tongji University, Shanghai, China
2014.9-2018.6 **Chemical Biology**, B.Sc. Xiamen University, Xiamen, China
2017.2-2017.7 **Computer Engineering**, Visiting undergraduate researcher National Sun Yat-san University, Taiwan, China

Skills & Abilities & Knowledge

Programming Python, R, Bash, MySQL, Linux cluster, etc
Computation Machine Learning/Deep Learning, Algorithm, Mathematics, Graph, etc
Bioinformatics Single Cell/Whole-genome/16S sequencing, etc
Cheminformatics Molecular calculation, Chemical kinetics, etc
Experiments Molecular biology and Inorganic/Organic/Analytic/Physic Chemistry
Engineering Server assembly, Electronic Circuits, Material, Neural Image analysis
Cooperation Teamwork with multiple projects

Employment

2018.5-2018.11 Internship bioinformatics engineer
Use machine learning to develop methylation chip software
At Sinotech Genetics Corporation, Shanghai, China

Publications

2022:
1. **Zhou, Y.**, et al. An extensible pipeline for analyzing whole-genome metagenomic sequencing. (first-author, ***in preparation***)
2. **Zhou, Y.**, et al. Predicting catalytic reactions with transfer learning using Transformer architecture. (first-author, ***in preparation***)
3. **Zhou, Y.**, et al. Profiles of telomeric repeats in Insecta reveal diverse forms of telomeric motifs in Hymenopterans. ***Life Science Alliance***, (IF = 4.6, first-author, ***in-revision***)

2021:
1. **Zhou, Y.**, et al. Metagenomic analysis revealed significant changes in cattle rectum microbiome and antimicrobial resistome under fescue toxicosis. ***Microbiome***, (IF = 14.6, first author, ***in-revision***)
2. Ruan, H., …, **Zhou, Y.**, et al. Single-cell transcriptome analysis of diffuse large B cells in cerebrospinal fluid of central nervous system lymphoma. ***Iscience***, (IF = 5.08)

2020:
1. Ruan, H.*, **Zhou, Y.***, et al. Circulating tumor cell characterization of lung cancer brain metastasis in the cerebrospinal fluid through single-cell transcriptome analysis. ***CLINICAL AND TRANSLATIONAL MEDICINE***, (IF= 11.492, co-first author)

Awards & Patents

2019 Auburn University Presidential Graduate Research Fellowship
2018 Methylation Chip Analysis Software, Registration #: 2018SR981376