Julia Zheng
zhengjul@msu.edu

COMPUTER SKILLS

Languages

- Proficient in: Python, C
- Familiar with: Bash, R, C++, Java, MASM, HTML, PHP, SQL

Software

- HPCC Systems, Microsoft Suite, Adobe Photoshop, GIMP, TopCon Synergy database, LaTeX, Zotero

EDUCATION

(Candidate) PhD in Computer Science & Engineering and Ecology, Evolution, & Behavior 2019 - Current
Michigan State University in East Lansing, MI, United States of America

BS in Computer Science (With Great Distinction) May 2019
University of Windsor in Windsor, ON, Canada

BS in Microbiology and Immunology Feb 2018
McGill University in Montreal, QC, Canada

PUBLICATIONS & CONFERENCES

Peer-reviewed journal papers

1. **Zheng, J.**, Nishida, Y., Okrasińska, A., Bonito, G., Heath-Heckman, E., & Liu, K. J. (2023). The Impact of Species Tree Estimation Error on Cophylogenetic Reconstruction. *ACM-BCB.*
2. Wang, W., Hejasebazzi, A., **Zheng, J.**, & Liu, K. J. (2021). Build a better bootstrap and the RAWR shall beat a random path to your door: phylogenetic support estimation revisited. *Bioinformatics*, 37(Supplement_1), i111-i119.
3. Hamzeh, O., Alkhateeb, A., **Zheng, J.**, Kandalam, S., & Rueda, L. (2020). Prediction of tumor location in prostate cancer tissue using a machine learning system on gene expression data. *BMC bioinformatics*, 21(2), 1-10.
4. Hamzeh, O., Alkhateeb, A., **Zheng, J. Z.**, Kandalam, S., Leung, C., Atikukke, G., Cavallo-Medved, D., Palanisamy, N., & Rueda, L. (2019). A hierarchical machine learning model to discover Gleason grade-specific biomarkers in prostate cancer. *Diagnostics*, 9(4), 219.
5. **Zheng, J. Z.**, Li, Y., Lin, T., Estrada, A., Lu, X., and Feng, C. (2017). Sample size calculations for comparing groups with continuous outcomes. *Shanghai Arch Psychiatry,* **29**(4): 250-256.
6. Xu, M., Fralick, D., **Zheng, J. Z.**, Wang, B., Tu, X. M., and Feng, C. (2017). The differences and similarities between two-sample t-test and paired t-test. *Shanghai Arch Psychiatry*, **29**(3): 184-188.
7. Wang, H., Peng, J., Wang, B., Lu, X., **Zheng, J. Z.**, Wang, K., Tu, X. M., and Feng, C. (2017). Inconsistency between univariate and multiple logistic regressions. *Shanghai Arch Psychiatry*, **29**(2): 124-128.
8. Wang, H., Peng, J., **Zheng, J. Z**., Wang, B., Lu, X., Chen, C., Tu, X. M., and Feng, C. (2017). Win ratio - An intuitive and easy-to-Interpret composite outcome in medical studies. *Shanghai Arch Psychiatry*, **29**(1): 55-60.
9. Feng, G., Peng, J., Tu, D., **Zheng, J. Z**., and Feng, C. (2016). Two paradoxes in linear regression analysis. *Shanghai Arch Psychiatry*, **28**(6): 356-360.
10. Wang, H., Peng, J., **Zheng, J. Z**., Wang, B., Tu, J. X., and Feng, C. (2016). Does more data mean higher efficiency? An experience from pre- and post-treatment study with missing data. *Shanghai Arch Psychiatry,* **28**(4): 235-240.

Conference presentations

1. Zheng, J. (2022). "Cophylogenetic event reconciliations are affected by species tree quality", *Evolution 2022*, June 24-28, 2022. Poster presentation and 14 min talk. Jun 25, 2022
2. Zheng, J. (2022). "Performance study: cophylogenetic event estimations are impacted by species tree uncertainty", *2022 Engineering Graduate Research Symposium*, April 14, 2022. Poster. (Won best poster.) Apr 14, 2022
3. Zheng, J. (2021). "Species tree accuracy impacts codivergence analysis", *Virtual Evolution 2021*, June 21-25, 2021. 6 min talk. Jun 17, 2021
4. Zheng, J. (2021). "Species tree accuracy impacts codivergence analysis", *Virtual Midwest Ecology and Evolution Conference 2021*, March 20-21, 2021. 12 min talk. Mar 20, 2021

PROFESSIONAL EXPERIENCE

Research Assistant to Dr. K. Liu Aug 2019 - Current
Department of Computer Science and Engineering, Michigan State University

- Published papers with colleagues
- Conducted performance studies on inferring co-phylogenetic trees
- Replicated experiments from published papers

Software Engineer Intern Apr - Aug 2019
RetiVue, LLC

- Wrote C# code to interface DICOM database and user interface Orthanc with native RetiVue applications
- Investigated data security within local area networks

Research Assistant to Dr. L. Rueda May 2018 - Apr 2019
School of Computer Science, University of Windsor

- Semi-automated the process of extracting prostate cancer data from CBioPortal and performed data pre-processing
- Co-authored 2 manuscripts and poster presentation on applying machine learning to predict prostate cancer from imaging and medical histories

IT Student Consultant May 2017 - Apr 2019
Leddy Library, University of Windsor

- Resolved IT issues, troubleshooted machines, and documented abnormalities into internal software

GRANTS AND AWARDS

NSF Research Traineeship IMPACTS Fellowship 2022-2023
Michigan State University and the NSF Research Traineeship Program (DGE-1828149)
Summer Fellowship in Ecology, Evolution, and Behavior 2022
Michigan State University
Best poster at 2022 Engineering Graduate Research Symposium 2022
Michigan State University
Summer Fellowship in Computer Science & Engineering 2022
Michigan State University
Summer Fellowship in Ecology, Evolution, and Behavior 2021
Michigan State University
BEACON Science and Technology Center Top Up Fellowship 2019 - 2024
Michigan State University
Student Consultant Outstanding Service Award May 2019
University of Windsor
Dean's List 2019
University of Windsor

OUTREACH & VOLUNTEERING

Member of CSE Diversity, Equity, Inclusion & Accessibility Steering Committee Nov 2022 - Current
Department of Computer Science and Engineering (CSE) at Michigan State University (MSU)
Advisor at Girls Who Code Oct 2022 - Current
MSU Women in Engineering
Copy Editor 2016 - Current
International Journal of Librarianship
Reviewer Sep 2022
International Conference on Bioinformatics and Biomedicine (IEEE BIBM)
Reviewer Aug 2022
International Symposium on Bioinformatics Research and Applications (ISBRA)
Mentor to an undergraduate student Jun - Aug 2022
Summer Research Opportunities Program at Michigan State University

Assistant at Geometry in Three Dimensions: Exploring Polyhedra — May 21, 2022
Girls Math and Science Day 2022 at Michigan State University
Mentor to 2 undergraduate students — May - Aug 2021
Distributed Research Experiences for Undergraduates at Computing Research Association
Reviewer — May 2021
ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB)
Mentor at Girls Who Code — 2020
MSU Women in Engineering

PROFESSIONAL AFFILIATIONS

Member, *Society for the Study of Evolution* — 2019 - Current
Member, *Association for Computing Machinery* — 2020 - Current
Member, *International Society for Computational Biology* — 2018 - Current