Gainesville, FL
(848) 234-9639
dayuan.wang.stats@gmail.com

Dayuan Wang

Bioinformatics/Biostatistics/Statistics

dayuan-wang.github.io
github.com/dayuan-wang
linkedin.com/in/dayuan-wang-bios

Skills

Languages & Tools	R, Python, PyTorch, TensorFlow, SAS, SQL, Bash, Jupyter, Linux, HPC, Cloud computing (AWS, GCP), Docker, renv, conda, GitHub, Markdown, Quarto, LaTeX
Statistics	Hypothesis testing, High-dimensional data, Bootstrap / resampling, Causal inference, GLMs, Mixed-effects & longitudinal models, Survival analysis, Bayesian methods, Clinical trial design, Power analysis, Missing-data methods, Multiplicity adjustment, Experimental design (DOE), Time-series analysis
ML & Data Science	Deep learning, Neural networks, Transformers, Penalized regression, Dimension reduction, Supervised & unsupervised learning, Ensemble methods, Feature engineering, Model interpretability (SHAP)
Omics & Bioinformatics	NGS, scRNA-seq, CITE-seq, DNA-seq, Spatial transcriptomics, Multi-omics integration, Variant & CNV detection, Seurat/Scanpy, Biomarker discovery, Translational research (oncology, immunology)
AI & Automation	Agentic AI workflows (Claude Code, Codex), Vibe coding, Multi-agent systems, Model Context Protocol (MCP), Skills & context management, LLM-assisted analysis, Workflow automation, Google Cloud AI

Education

PhD in Biostatistics	*University of Florida, FL*	**Aug. 2022 – Dec. 2026**
M.S. in Biostatistics	*Rutgers University, NJ*	**Aug. 2018 – Dec. 2020**
B.S. in Biology	*Peking University, China*	**Sep. 2014 – July 2018**

Working Experience

Oncology Translational Bioinformatics Intern **June 2026 – Aug. 2026**
Bristol Myers Squibb — IPS, Translational Oncology *Cambridge, MA*
- Applied deep learning to clinical-trial data for AI-powered multi-modal biomarker discovery in oncology treatment response.
- Integrated peripheral biomarkers and clinical variables into interpretable predictive models to support translational decisions.

Doctorate Research Assistant **Aug. 2022 – Current**
Sepsis and Critical Illness Research Center, University of Florida *Gainesville, FL*
- Build reproducible end-to-end bioinformatics pipelines (scRNA-seq, bulk RNA-seq, microarray) in R/Python on HPC.
- Identify immune biomarkers and key genes via multi-omics statistical modeling (mixed-effects models, dimension reduction) of high-dimensional sequencing data, informing therapeutic-target and mechanism-of-action studies in sepsis.

Health Data Specialist **June 2019 – Feb. 2020**
New Jersey Department of Health *Trenton, NJ*
- Applied real-world-data analytics and GLMs to evaluate Hepatitis C burden and risk factors for population-health surveillance.
- Produced high-frequency COVID-19 surveillance reports and dashboards for rapid-response public-health decisions.

Research Projects

CN-RNN: Deep-Learning CNV Detection from Exome Data **Aug. 2023 – May 2025**
- Developed CN-RNN, a hybrid recurrent neural network that detects copy number variants from exome sequencing data; +20% F1 over existing tools on large autism and congenital-heart-disease cohorts with lower runtime. Open-sourced on GitHub.

Spatial Multi-omics CNA Detection (Statistical Method) **Aug. 2024 – Current**
- Building a first-of-its-kind statistical method integrating spatial transcriptomics with DNA-seq for copy number alteration (CNA) detection and tumor-subclone classification, addressing data sparsity and noise; open-source R package in preparation.

Selected Publications

D Wang, F Qin, W Bao, R Bacher, D Chung, Q Lu, PA Efron, G Cai, F Xiao. "CN-RNN: a Deep Learning Framework for Copy Number Variation Detection with Exome Sequencing Data." *bioRxiv*, doi: 10.64898/2026.05.13.724920. (2026).

JC Rincon, **D Wang**, et al. "Innate immune training in the neonatal response to sepsis." *Molecular Medicine*, 31(1), 159. (2025).

Full publication list available in the detailed CV.

Honors & Awards

PhD Fellowship in Artificial Intelligence *College of Public Health and Health Professions, University of Florida*	**2024 – 2025**
Department Achievement Award & Preliminary Exam Award *Department of Biostatistics, University of Florida*	**2023**
Student Research Travel Scholarship *Department of Biostatistics, Rutgers University, NJ*	**2019**
Outstanding Undergraduate Student Scholarship *Peking University, China*	**2014 – 2018**
Undergraduate Honors Program in Biology (UHPB) *School of Life Sciences, Peking University, China*	**2014 – 2017**
Gold Medal, 25th International Biology Olympiad *Bali, Indonesia*	**2014**