

Youwei Hu

Bayesian modeling, EEG biomarker discovery, and AI-assisted data pipelines. Translating complex quantitative analyses into actionable insights for research and stakeholders. Experienced in cross-disciplinary collaboration across public health and neuroscience.

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- 🔄 <https://github.com/hww228/shedding-hub>
- 🌐 <https://www.linkedin.com/in/youwei-hu-62744b30b/>
- 🔧 Python, R, SQL, MATLAB, SAS, Git, Power BI

Education

Emory University, Rollins School of Public Health Atlanta, GA, United States
MS, Biostatistics (GPA: 3.95 / 4.00) 2024 - 2026

Relevant Coursework: Regression Analysis, Statistical Inference, Machine Learning, Data Science, SAS, SQL

University of Liverpool Liverpool, United Kingdom
BS, Financial Mathematics (GPA: 3.76 / 4.00) 2020 - 2024

Relevant Coursework: Stochastic Processes, Statistical Distribution Theory, Linear Statistical Models

Experience

Emory CIDMATH - Graduate Research Assistant Atlanta, GA, United States

Wastewater-Based Epidemiology & Viral Shedding Modeling 2024- Present

- Conduct literature review to identify individual-level longitudinal viral shedding datasets, prioritizing studies reporting Ct values and viral load trajectories
- Manually extracted viral shedding data from figures, tables, and text across publications to construct benchmark dataset for AI model training and validation
- Use LLM-powered AI extraction pipeline to parse shedding data into standardized YAML files governed by a custom schema, ensuring structural consistency across studies
- Developed Bayesian hierarchical models in Stan to characterize viral shedding dynamics, integrating heterogeneous data sources (viral load concentration and Ct values) into a unified longitudinal framework

Goizueta Brain Health Institute - Graduate Research Assistant Atlanta, GA, United States

EEG Biomarker Discovery for Alzheimer's Disease 2025 - Present

- Built a standardized EEG preprocessing pipeline (MATLAB/EEGLAB and MNE-Python) to clean and prepare EEG data for downstream brain signal analysis
- Extracted quantitative EEG features (band power measures and frequency ratios) to evaluate relationships between brain activity patterns and cognitive performance
- Computed advanced signal complexity metrics (wavelet energy, quadratic entropy, fractal dimension) to enhance biomarker sensitivity and support classification modeling
- Presented findings at Georgia Statistics Day, delivering a poster on QEEG biomarkers for Alzheimer's disease severity stratification

Soochow Securities – Information Technology Department Shanghai, China

Data Analyst May 2024 - August 2024

- Developed quantitative risk and forecasting models in R to evaluate portfolio volatility and financial exposure
- Computed performance and risk-adjusted return metrics to inform portfolio strategy
- Validated model outputs to ensure regulatory compliance and analytical accuracy
- Collaborated with research and trading teams to interpret market sentiment data