HONGQING (IVES) XUE

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EDUCATION

Wake Forest University Winston-Salem, NC
Bachelor of Science in Applied Statistics *May 2026*
Second major in Economics
GPA: 3.78; Dean's List

TECHNICAL AND LANGUAGE EXPERIENCE

R, Stata, Maple, LaTeX, Python, Java, Microsoft Office: Word, Excel and PowerPoint
Bilingual *in* Chinese and English, Japanese (Beginner), Spanish (Beginner)

PROFESSIONAL & RESEARCH EXPERIENCE

Tutor and RA Works Winston-Salem, NC
MSC Tutor and Research Assistant, Mathematics / Economics Department *August 2023 – Present*

- Provided tutoring to students in subjects including Calculus, Linear Algebra, Probability, and Linear Models
- Developed R codes to automate the detection of dataset characteristics and converted raw data into panel data
- Assisted in building comprehensive datasets integrating variables like temperature, crop distribution, country maps, and regional information, streamlining them for simulation and analysis
- Optimized R code to efficiently extract cropland information, merge regional temperature data with specific crops, and calculate average temperature for targeted spots
- Integrated temperature data into geographic map figures to enhance the visualization of agricultural data

Mathematical model for syphilis with reinfection Winston-Salem, NC
Individual Study Under Guidance of Dr. Chukwu *September 2023 – August 2024*

- Devised a comprehensive mathematical model to simulate syphilis transmission, reinfection, and treatment stages within the MSM population
- Constructed a compartmental model framework that delineates population segments into susceptible, infected, latent, and two distinct recovered groups, factoring in treatment efficacy and failure
- Integrated nuanced epidemiological factors such as infection rates, treatment protocols, and temporary immunity to enhance the model's accuracy and applicability
- Implemented differential equation-based simulation that accounts for new births, primary and reinfection rates, treatment proportions, and immunity waning to predict disease progression

Collider Simulation Winston-Salem, NC
Research Experience Under Guidance of Dr. McGowan *September 2023 – May 2024*

- Executed code adaptation from a seminal paper to include new variables: initial sodium intake, subsequent SBP, and early proteinuria measurements
- Maintained fidelity to original study's temporal causality, applying it to earlier data points to enhance model robustness
- Reran simulations to assess the altered dynamics between sodium levels and SBP, substituting early proteinuria data for end-stage measurements to increase predictive reliability
- Researched on the effect of collider on models and discussed the possible causations of collider bias

LEADERSHIP AND COMMUNITY ENGAGEMENT

Data Fest | Wake Forest University | *Team Leader*
• Led the team of four students using R to build models and visualization for e-book interaction data
Kaggle Competition | *Team Member* | Home Credit | Bronze Prize
• Actively discussed and formulated reasonable competition model iteration tasks
• Derived the features based on Aggregate Features and Diff Features from 465 native features
• Used LightGBM and CatBoost models to solve risk control issue initiated by Home Credit Group
Chinese Student and Scholar Association | Wake Forest University | *Outreach Chair*
Chinese Ensemble | *Operation Chair*
Forsyth Humane Society | *Volunteer*
WENHUA Chinese School | *ZhuDi Teacher*