Qian Shi

Contact Information 13th St, Gainesville, FL 32608 qian.shi@ufl.edu
Personal Website LinkedIn

Objective

Ph.D. in Design, Construction, and Planning with hands-on experience in construction technology research, simulation modeling, and AI-driven innovation. Seeking an innovation analyst role where I can contribute to technology scouting, pilot testing, and strategic evaluation of emerging tools for the built environment.

Education

University of Florida, Gainesville, FL
Ph.D. in Design, Construction, and Planning May 2025

- Relevant Coursework: Construction Info Systems, Geographic Information Systems, Neural Networks, R Computing, Algorithms

University of Florida, Gainesville, FL
M.S. in Design, Construction, and Planning August 2020

Southeast University, Nanjing, China
B.Eng. in Civil Engineering June 2017

Research Experience

University of Florida, Rinker Lab — Research Assistant Aug 2020 – Present

- Conducted R&D on AI-powered simulation models for acoustics in built environments, focusing on scalability, accuracy, and performance improvement.
- Designed and tested coarse-grain generative methods (DDPM-based) to accelerate time-dependent simulation, achieving up to 15.6× speedup with <4 dB accuracy error.
- Evaluated emerging simulation workflows by comparing hybrid models (AI vs FEM) across time and resource metrics, producing actionable results for system integration.
- Collaborated with interdisciplinary researchers to test computational tools in physical/virtual pilot setups and document outcomes for future scalability.
- Tracked trends in AI-based simulation, sensor data modeling, and field validation to identify innovations transferrable to construction processes.

University of Florida, Dept. of Biostatistics — Research Contributor 2022

- Developed an R package for generating FHWA-standardized bridge bending moment data across truck classes.

Working Experience

Hengda Construction Company, Inner Mongolia, China
Data Analyst Jul 2017 – Oct 2017

- Analyzed construction site data to identify delays and cost overrun trends; used SQL and Excel to prepare dashboards for project managers.

Technical Skills

- Research & Analysis: Technology benchmarking, feasibility studies, performance metrics, simulation validation
- Data Tools: Python (NumPy, Pandas, Matplotlib), SQL, Excel, Power BI (basic), Git
- Modeling: COMSOL Multiphysics, FEM, DDPM (diffusion models), AI-assisted simulation
- Project Methods: Pilot program design, reproducible workflows, quality assurance, Lean concepts
- Communication: Academic + technical report writing, presentations, stakeholder coordination

Certificates

- Neural Networks and Deep Learning – Coursera (Andrew Ng)
- Introduction to Financial Accounting – Wharton