

# Wenqi He

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## EDUCATION

### University of Illinois Urbana-Champaign

*Master of Computer Science*

Dec. 2023 (expected) | Urbana, IL, US

### Georgia Institute of Technology

*Bachelor of Science in Computer Science*

*Minor in Physics*

Dec. 2019 | Atlanta, GA, US

## PERSONAL PROJECTS

GPU-accelerated Vector Graphics Renderer

Simple Software Rasterizer

Simple Software Raytracer

Simple Raster Map Tile Renderer

Canvas-based User Interface Framework

Server-side Interactive React Renderer

Frontend Framework and Module Bundler

Stack-oriented Esoteric Programming Language

## RELEVANT COURSEWORK

### *Graphics, Physics & Scientific Computing*

Scientific Visualization

Interactive Computer Graphics

Computational Photography

Parallel Computing (GPU)

Numerical Analysis

Partial Differential Equations

Differential Geometry

General Relativity (Graduate-level)

Quantum Mechanics

Quantum Computing

### *Language, Data & Communication*

Compiler Construction

Relational Databases

Distributed Algorithms

Computer Networking

Information Security

Information Retrieval

Natural Language Processing

## WORK EXPERIENCE

### National Center for Supercomputing Applications

*Graduate Research Assistant, Visual Analytics*

Aug. 2022 - Present | Urbana, IL, US

- Developed software for scientific researchers, focusing on biomedical and geospatial data visualization.
- Responsible for the full-stack development and deployment of the BiteMap application for the INHS MEL.
- Created cartographic visualization of tick bite data using GeoJSON, OpenLayers, PostgreSQL and census data.
- Participated in the maintenance of PhyloDiver, an interactive tool for visualizing tumor phylogenies.

### Gllue Software

*Frontend Engineer, Applicant Tracking System (ATS)*

Nov. 2020 - Nov. 2021 | Shanghai, China

- Collaborated with multiple teams to build web applications, WeChat mini-programs, services and libraries.
- Contributed to the drag-and-drop user interface builder framework that powers the ATS customization system.
- Responsible for the frontend integration of a new Single Sign-On system for multiple products.

### Étude LLC

*Software Engineer, Founding Team*

Aug. 2019 - Aug. 2020 | Atlanta, GA, US

- Implemented several features of the desktop PDF reader, including table of contents parsing and text highlighting.

## TECHNICAL SKILLS

### *Languages*

TypeScript, JavaScript, C, C++, GLSL, WebAssembly, Rust, SQL, Python, Java, PHP, HTML, SVG, CSS, Sass, LESS, OCaml, Haskell, Common Lisp, MATLAB, Mathematica

### *Frameworks & Libraries*

Angular, React, Node.js, Next.js, NumPy, SciPy, PyTorch

### *Development Tools*

Bash, Git, Vim, Visual Studio Code, LLVM, Make, esbuild, Babel, Rollup, webpack, Vite, Tailwind CSS, Puppeteer, Cypress, Jest, TypeDoc, ESLint, Prettier, GitHub Actions, GitLab CI, Docker, Kubernetes