# Yuxi Wang

SDK Development | 3D Visualization

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## Profile

Experienced developer specializing in 3D graphics and interactive web applications, with expertise in Three.js, WebGL, and modern rendering techniques. Skilled in building intuitive React-based interfaces for complex 3D operations, performance optimization, and creating elegant solutions to challenging spatial problems. Over 9 years of experience developing web applications with a focus on 3D visualization and delivering exceptional user experiences for technical applications.

## Skills

### Frameworks & Libraries

- React (6 yrs), WebComponents (2 yrs), Svelte (1 yr)
- Three.js (5 yrs), d3.js (1 yr), prosemirror (2 yrs)
- RxJS, SWR, Tailwindcss

### Tools

- Git, Webpack, Rollup, Babel, esbuild
- Vercel, Node.js, Express, MongoDB
- Jest, Cypress, React testing library
- Cursor Agent, Claude Code

### Languages

- JavaScript/TypeScript (10 yrs)
- HTML & CSS (10 yrs)
- C# (2 yrs)

## Experience

### Mappedin

*Staff Software Developer*                                    *Oct 2023 - Now*

- Spearheaded V6 SDK redesign with high-throughput rendering architecture and GPU shader optimization, then sole-developed React Native SDK that secured multi-million dollar enterprise contracts with major airports and venues
- Developed SDF-based Text3D rendering API delivering crisp visuals across zoom levels, widely adopted by mall customers
- Designed 3D models SDK API with environment map reflections, collaborating with 3D artists on lighting; adopted by venues for custom model integration
- Designed and built path visualization system end-to-end, including billboarded geometry and simplification algorithms balancing aesthetics with performance
- Implemented spatial fitting algorithms that eliminated thousands of support hours for venue setup
- Stepped into team lead role for 4-engineer team, driving V6 SDK to completion and coordinating delivery of final major features
- Established testing infrastructure including end-to-end visual regression pipeline for 3D applications

### Curvenote(YC)

*Senior Software Developer*                                    *May 2021 - Sep 2022*

- Entrusted with building the core product as the first hire, defining frontend standards and best practices.
- Utilized TypeScript, React, and ProseMirror for development.
- Delivered innovative features and optimizing architecture for effective maintenance and functionality.
- Implemented full-stack features including OAuth integration, UI programming, and rich text editor functionalities.
- Boosted application performance, facilitating seamless usage with larger documents and broadening customer reach.
- Led end-to-end testing initiatives and contributed to monorepo migration for streamlined code maintenance and testing.

### Seequent

- Led the transition from WebComponents to a more robust React & Redux architecture.
- Appointed to the visualization team and spearheaded the revamp of the existing visualization library using TypeScript and Three.js.
- Achieved a 4x frame rate increase for large data models, significantly improving the application's performance and capabilities.
- Integrated various emerging technologies to ensure architectural scalability, accommodating the company's growth and evolving needs.
- Mentored junior team members and established coding standards for frontend development.

## Freelance Developer

### RDS DataViz
*Data Visualization Developer*                                                             *Sep 2019 - Jun 2020*

- Expanded technical skills by independently creating a robust data visualization library using TypeScript and d3.js to meet stringent feature and performance specifications.

## Agile Surface Engineering Lab

### SoD-Toolkit
*Software Developer Intern, Research Assistant*                                            *June 2014 - June 2016*

- Developed and maintained the SoD-Toolkit, a web-based toolkit for prototyping multi-sensor, multi-device environments.
- Designed and implemented 2D and 3D visualizer. Utilized html5 canvas and Unity to provide visual demonstration of server state in realtime.
- Developed and maintained client library in various platforms including C#, Obj-C, JavaScript, Android, and Unity.
- Designed server architecture for real-time state control and geometric computation.
- Integrated the toolkit with various hardware technologies, including MS Kinect, Google Tango, and Leap Motion.

### ERWear
*Software Developer, Researcher*                                                           *Sep 2015 - Jun 2016*

- Conducted undergraduate research on enhancing emergency responders' situational awareness through wearable technology.
- Utilized IDEO methods for design refinement and user feedback analysis.
- Developed a functional prototype integrating glass and wrist-based wearable hardware.

# Education

## University of Calgary

### Computer Science
*Bachelor's Degree*                                                                        *Sep 2012 - Jun 2016*
Graduated from University of Calgary Bachelor of Science in Computer Science Internship Program.