

## Summary

Full-Stack Software Engineer with strong skills in problem-solving, debugging, and systems thinking. With a background in architectural design and a passion for computational thinking, I bring a creative yet analytical approach to software development. Known for sharp troubleshooting and a collaborative mindset, I focus on building efficient, scalable, and user-centered applications.

## Skills

<b>Frontend Development:</b>	Next.js, React, JavaScript, TypeScript, Redux, HTML, CSS, Tailwind CSS
<b>Backend Development:</b>	Go, Node.js, Express.js, Python, Java, C++, TypeORM, REST API, Postman
<b>Database:</b>	MySQL, MongoDB
<b>UI/UX Design:</b>	Figma, Adobe Suite, Prototyping, User Research, Responsive Design
<b>Computational Design &amp; BIM:</b>	Revit, Dynamo, Rhino, Grasshopper, Ladybug, Sunflower, ClimateStudio
<b>Product Management:</b>	Agile, Scrum, SDLC, GitHub

## Full-Stack Projects

Portfolio: [www.hangningzhou.com](http://www.hangningzhou.com)

### CoCraft – Design Better Homes Together

*Next.js, React, TypeScript, Redux Toolkit, TailwindCSS, Go, MongoDB, AWS S3, OpenAI API, JWT, HTTP-only cookies*

A live platform that connects homeowners, designers, and contractors to visualize, share, and collaborate on home design. Users can create posts, generate AI design visuals, comment, follow others, and explore personalized feeds. Featuring secure login, user roles, cloud storage, and a responsive, dark-mode-ready UI. CoCraft makes creating beautiful spaces together seamless and inspiring.

- **Live Site:** <https://www.cocrafthome.com/>
- **Frontend GitHub:** <https://github.com/hnhzhou16/project-cocraft-client>
- **Backend GitHub:** <https://github.com/hnhzhou16/project-cocraft-server>

### Hugzest – Smarter Shopping with AI

*Node.js, React, TypeScript, Redux, CSS, Express.js, SQLite, TypeORM, OpenAI API, PayPal API, Google Maps API, JWT*

A modern e-commerce platform built with React, featuring AI-powered product recommendations, dynamic product filtering, address autocomplete, interactive image galleries, and real-time persistent cart updates. Users enjoy a streamlined shopping experience with secure PayPal checkout. It demonstrates scalable backend/frontend integration and real-world deployment.

- **Live Site:** <https://hugzest.com>
- **Frontend GitHub:** <https://github.com/hnhzhou16/project-ecommerce>
- **Backend GitHub:** <https://github.com/hnhzhou16/project-ecommerce-backend>

## Experiences

**Technical Designer, Gensler,** Seattle, USA

05/2019 - Current

**Architectural Design | Automation | Simulation | Visualization**

- Developed parametric design systems using **Rhino + Grasshopper** and **Revit + Dynamo** to generate adaptive building forms, facades, and spatial configurations.
- Built custom scripts in **Python and Dynamo** to automate BIM workflows, reducing documentation time and increasing accuracy.
- Integrated building performance simulations with **Ladybug, Honeybee, and ClimateStudio**, incorporating real-world environmental data (solar, wind, daylight).
- Created dashboards and data visualizations to support early design decisions using quantitative metrics.
- Collaborated cross-functionally with architects, engineers, and developers to deliver technically robust, visually compelling designs.

**Junior Designer, Fernando Romero Enterprise,** New York, USA

08/2017 - 02/2019

**Architectural Design | 3D Modeling | Digital Prototyping**

- Produced computational design models and high-fidelity 3D visuals for large-scale architectural projects.

## Education

**Master of Architecture**

08/2015 - 04/2017

University of Michigan, Ann Arbor, USA

**Bachelor of Architecture**

09/2010 - 06/2015

Xiamen University, China