YUE CHENG

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EDUCATION

University of Toronto — Toronto, Canada
Bachelor of Science in Computer Science — *Sep. 2023 – Present*

Tongji University — Shanghai, China
Bachelor of Engineering in Industrial Design — *Sep. 2015 – Jul. 2019*

SKILLS

Languages: Python, Java, C, HTML/CSS, JavaScript/TypeScript, SQL
Frameworks/**Tools**: React, Next.js, Tailwind CSS, Node.js, Maven, Kubernetes, MongoDB, Redis, Git, Docker, AWS/Azure, Shell, Vim, RegEx, Arduino, Processing
Design: Office Suite, Adobe Suite, Figma, Sketch, Rhino, Grasshopper, Maya, 3ds Max, AutoCAD

PROJECTS

Personal Website | *Next.js, TypeScript, Tailwind, Framer Motion*

- Built a **responsive** personal blog website using **Next.js**, focusing on delivering a smooth user experience and modern design aesthetics.
- Implemented **Contentlayer** for efficient **data handling**, streamlining content management within the site.
- Utilized **Tailwind CSS** and **Framer Motion** for frontend design, creating a dynamic user interface with responsive animations.

Digital Collections Showcase | *Next.js, TypeScript, Tailwind*

- Developed a **book, movie, and music collection showcase** website using **Next.js**, offering a seamless platform for users to view their collections.
- Integrated a **personal API from NeoDB** to fetch and display user-specific data, enhancing the interactivity and personalization of the site.
- Utilized **React SWR** to automatically retrieve and update user data, providing real-time information.

Flowing Metaball | *Processing, Max/MSP, Grasshopper*

- Developed a **parametric spatial design solution**, using **Processing** and **Max/MSP** to simulate **metaball forms** and combine them with functional requirements.
- Programmed in **Grasshopper** to automate the generation of **spatial layouts**, incorporating parameters such as shape, size, and functional needs of the interior space.

Lumosonic | *Arduino, Leap Motion, MIDI, DMX*

- Designed an **interactive game system** that integrates **open-source hardware** with multimedia art.
- Utilized **Leap Motion** to capture hand movements and send data to **Arduino**, enabling interaction with **MIDI music software** for dynamic, real-time composition and performance.
- Integrated **DMX lighting control** to synchronize **Par lights** with the music, creating immersive and responsive dynamic lighting effects.

EXPERIENCE

Research Assistant — Chongqing, China
Chongqing University — *Jan. 2021 – Mar. 2022*

- Developed a demo integrating geographic information and spatial asset analysis utilizing **GIS**, **NetMiner**, and **SPSS**, and completed a pilot project in a historical preservation area with **over 200 households**.
- Collaborated with interdisciplinary colleagues in human geography, statistics, and computer science to contribute to both a **nationally funded research project** and a **provincially funded project**. Played a key role in co-authoring **five academic papers**, conducting user research, and developing design concepts for **three urban planning projects**.
- Actively participated in **three academic conferences** on urban planning, co-authored and presented a **conference paper**, sharing insights on current industry trends and innovations.