

# YIJU LI

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*Last Revised: 2023/02/07. To access my latest resume, please click this [link](#). For further insights into my profile, kindly visit [YijuLi.info](#).*

As a student at the University of California, San Diego pursuing a dual degree in Computer Engineering and Applied Mathematics, I have a comprehensive understanding of both software and hardware development. I have a strong interest in hardware and am always looking for opportunities to explore and enhance my skills in this field. My background in Applied Mathematics has provided me with a solid foundation in mathematical modeling and problem solving, which I believe will be valuable assets in hardware engineering. I approach every task with a professional attitude and a commitment to delivering high-quality work. I am eager to bring my skills and knowledge to a new role and continue to grow as a hardware engineer.

## EDUCATION

Bachelor of Science in Computer Engineering  
Bachelor of Science in Applied Mathematics  
University of California, San Diego  
Sep 2020 - current

## TECHNICAL SKILLS

*The skills listed below have been thoroughly understood and consistently applied in my professional experiences and personal projects.*

### HARDWARE RELATED

- Computer Engineer: Digital Electronics and Circuit, Computer Architecture Design(ISA)
- HDL: SystemVerilog, VHDL
- EDA tools: Modelsim(Quarta), Quartus

### SOFTWARE RELATED

- Programming languages: Java, Python, C++(GLSL), C, JavaScript, HTML(WXML), CSS
- Focused Topics: Advanced Data Structures and Algorithms, Reinforcement Algorithms, Neural Network, CV, Kernel Programming, Computer Graphics
- Proficient Technologies: MySQL, MongoDB, React.js, Spring, Django, Express.js, Amazon Web Services (AWS), Alibaba Cloud, Linux, Git, DevOps
- Agile methodologies: Scrum, Kanban

## HARDWARE ENGINEERING PROJECT

*For a comprehensive understanding of my professional endeavors, I invite you to visit my website at [YijuLi.info](#), where more projects are available for review.*

### MIPS-INSPIRED MICROCONTROLLER DESIGN

- Implemented a MIPS-inspired Instruction Set Architecture (ISA) featuring 9-bit instruction length and 16 registers.
- Created a highly efficient and effective assembler program to translate human-readable assembly code into machine code in accordance with the ISA specification.
- Developed the necessary control unit, ALU, and memory components for the ISA using SystemVerilog.
- Conducted thorough testing and verification of the microcontroller design using a custom-designed testbench and Synthesized the SystemVerilog code in Quartus to demonstrate its functionality on hardware.

### CIRCUIT OPTIMIZER

- This is a project focused on optimizing Boolean functions for digital circuit design.
- The project involved taking as input a two-level description of a Boolean function and using a range of algorithms and heuristics to simplify and minimize the function.

### DSP SYSTEM DESIGN WITH VHDL

- Implemented a hardware design of the DSP system, utilizing the VHDL hardware description language.
- Designed and developed the required digital components, such as filters and signal processing blocks, to meet the specific requirements of the system.
- Verified the functionality and performance of the hardware implementation through simulation and testing, ensuring the correct operation of the DSP system.

## PROFESSIONAL EXPERIENCE

### SOFTWARE ENGINEER INTERN

Shengmu Life, 2022 Summer, 10 weeks Developed WeChat apps using WXHL and JavaScript, and collaborated on dynamic Android apps using Java and Android SDK.

### SOFTWARE ENGINEER INTERN

UBTech, 2021 Summer, 8 weeks Developed a web-application using JavaScript and React to improve functionality and user experience, modified components for accessibility and simplified the programming process for easier use by individuals of all ages.

### QUALITY ASSURANCE (QA) ENGINEER INTERN

CloudGame, 2020 Summer, 10 weeks Designed and executed test plans, identified and resolved software bugs, and performed pressure tests to ensure a seamless and stable user experience for the product.