# ORAzzQWQ

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## Summary of Qualification

- Experienced in digital IC design and VLSI system development with proven ability to implement complex circuits including AES encryption, RISC-V CPU, and FSM-based control systems
- Strong foundation in hardware description language (Verilog) and digital design tools, with successful synthesis and timing optimization experience
- Proficient in various programming languages (C++, Python) with practical applications in spatial data analysis and GIS development

## Education

**National Cheng Kung University (NCKU)** Sep. 2020 – Present

*BS in Geomatics and Computer Science and Information Engineering (double major)*

- Cumulative GPA 3.81/4.3
- Academic Award (awarded to top ranking 5%), Feb. 2022

## Projects

**Digital IC Design Projects** Jan. 2024 - Jun. 2024

*Course Projects - National Cheng Kung University*

- Implemented pipelined AES encryption circuit with optimized stages using Verilog
- Created matrix multiplier supporting 1st to 4th order operations with FSM control
- Developed check-in/pickup system with 8-state FSM and FIFO/LIFO queue management

**VLSI System Design Projects** Sep. 2024 - Jan. 2025

*Course Projects - National Cheng Kung University*

- Designed traffic light control system with multiple states and timing optimization
- Implemented processor architecture with ALU, register file, and instruction control unit
- Designed and implemented a 5-stage pipeline RISC-V CPU supporting core instruction set

## Work Experience

**Spatial Social Science Laboratory (NCKU)** Dec. 2023 – Present

*Research Assistant*

- Conducted spatial data analysis using Python to analyze urban transportation patterns, processing over 500,000 transit card transaction records from Kaohsiung City's TPASS program

## Technical Skills

- **Hardware Design:** Verilog HDL, FPGA, Digital Circuit Design, CPU Architecture
- **Programming:** C/C++, Python
- **Tools:** ModelSim, Synthesis Tools, GIS Software

## Certifications & Awards

- 3S Maker Competition Presentation Award, 2023
- College of Engineering Undergraduate Research Grant, National Cheng Kung University