

# Jason Yuchi Tsao

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Portfolio: <https://j7tsao.github.io/portfolio> | Github: <https://github.com/j7tsao>

## Software Skill

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**Programming Languages:** Python, JavaScript, HTML5/CSS3, C++

## Software Certificate/Projects (Hyperlink)

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|---|-----------|
| • freeCodeCamp Scientific Computing with Python         | Oct. 2021 |
| • freeCodeCamp Responsive Web Design                    | Jan. 2021 |
| • freeCodeCamp JavaScript Algorithms and Data Structure | Oct. 2020 |
| • freeCodeCamp Front End Development Libraries          | Sep. 2020 |
| • Travel Agency Administration System using C++         | Dec. 2021 |
| • Portfolio Webpage (HTML5 / CSS3 / JavaScript)         | Mar. 2022 |

## Work Experience

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### Qualcomm Technologies

**San Diego, CA**

*EngIT Engineer (Consultant)*

*Feb 2021 – Present*

- Verified Engineering flow (NBF) through Cloud provisioning (AWS EC2)
- Refurbished automation script (bash, Python) for Amazon Machine Images (AMI)
- Cross-site infrastructure provisioning for Qualcomm Vendor Remote Access & Debug (QVRAD)

*ASIC Implementation Engineer*

*2012 – June 2018*

- ASIC implementation for GPU cores: Gandalf, Elessar, Istari, Nazgul, Napali, Poipu, Hana, Kona
- Formal Verification (Cadence Conformal LEC), Physical Aware Synthesis (Synopsys Design Compiler Graphical)
- Static Timing Analysis (STA), fixing setup violation (Synopsys DCG/Prime Time)
- Owner of the 2<sup>nd</sup> biggest hard macro in GPU core (Texture Pipe, TP Wrapper, 5.1 Million gates, 3X TP)

### Illinois Institute of Technology

**Chicago, IL**

*Research Assistant*

*2007 – 2011*

- Area-efficient VLSI implementation for parallel linear-phase digital FIR filter of even and odd length
- VLSI pipeline system (Multimedia processor) power reduction for via single comparator-based clock gating

*Teaching Assistant*

*2007 – 2011*

- ECE212: Circuit Analysis
- ECE429: Introduction to VLSI Design

### ProMOS Technologies

**Hsinchu, Taiwan**

*Wafer Sort Engineer*

*2003 – 2005*

- Wafer testing troubleshooting and wafer prober maintenance in fab
- Die testing data analysis and wafer yield improvement

## Education

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### Illinois Institute of Technology

**Chicago, IL**

*Ph.D. Electrical Engineering (GPA: 3.51 / 4.0)*

*Dec 2011*

- PhD Dissertation Title:  
Hardware-Efficient VLSI Implementation for Parallel Linear-Phase Digital FIR Filter

### New York University Tandon School of Engineering

**New York, NY**

*M.S. Electrical Engineering (GPA: 3.75 / 4.0)*

*Jun 2007*

**Dayeh University**

*B.S. Electrical Engineering*

**Changhua, Taiwan**

*Jun 2001*

## **Awards**

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**Qualstar** (Qualcomm Recognition & Reward Program for Outstanding Contributions)

- 2015 – Extra efforts and dedication to incorporate very challenging last minute USP changes for successful Istari V3.0 TO.
- 2017 – Dedication to deliver the highest quality netlist as a GPU hard macro owner for Hana/Poipu V1.