

# Jason Yuchi Tsao

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

## Objective

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- Looking to switch to a full time job as a software engineer.

## Technical Skills

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Python, JavaScript, HTML5, CSS3, C++, bash, GIT, Django, React, MySQL, Linux/Unix, MS Windows

## Projects / Certificate (Hyperlink)

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| • freeCodeCamp Scientific Computing with Python            | Oct. 2021 |
| • freeCodeCamp Responsive Web Design                       | Sep. 2020 |
| • freeCodeCamp JavaScript Algorithms and Data Structure    | Oct. 2020 |
| • freeCodeCamp Front End Development Libraries             | Jan. 2021 |
| • Project of 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)

2021 – May 2022

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

**New York, NY**  
**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.