

Jason Yuchi Tsao

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

Technical Skills

Python, JavaScript, C++, bash, HTML5, CSS3, React, GIT, Node.js, Express, Django, Postman, MongoDB, Mongoose, SQL, Selenium, Pandas, Linux/Unix, MS Windows

Projects / Certificate

- Portfolio Webpage (HTML5 / CSS3 / JavaScript) [[URL](#) | [GitHub](#)]
- AOXOR Sportswear Webpages (Frontend) (React.js / HTML5 / CSS3) [[URL](#) | [GitHub](#)]
- Python Scripting for Fortune Teller [[GitHub](#)]
- Travel Agency Administration System using C++ [[GitHub](#)]
- freeCodeCamp Scientific Computing with Python Certification [[URL](#)] –
Projects: [Arithmetic Formatter](#), [Time Calculator](#), [Budget App](#), [Polygon Area Calculator](#), [Probability Calculator](#)
- freeCodeCamp Responsive Web Design Certification [[URL](#)] –
Projects: [Survey Form](#), [Tribute Page](#), [Documentation Page](#), [Product Landing Page](#), [Personal Page](#)
- freeCodeCamp Front End Development Libraries using React JS Certification [[URL](#)] –
Projects: [Random Quote Machine](#), [Markdown Previewer](#), [Drum Machine](#), [Calculator](#), [25 + 5 Clock](#)
- freeCodeCamp JavaScript Algorithms and Data Structure Certification [[URL](#)]

Work Experience

Intel Corporation

Remote

Sr. Software Engineer – Configuration Management

08.2022 – 12.2024

- Hardware Architectural Specification (ProMark HAS) release flow automation development (Python, Gitbash)
- Python script to report discrepancies between Hardware Architecture Features (*.xslm) and Architecture GUI Database
- RDL (*.xml) HAS document generation automation (Python)
- New project creation flow automation (Python)
- GitHub Repository management and maintenance

Qualcomm Technologies

San Diego, CA

EngIT Engineer (Consultant)

01.2021 – 05.2022

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

Self-Employed (E-Commerce, Realtor)

2019 – 2020

Qualcomm Technologies

San Diego, CA

ASIC Implementation Engineer

2012 – 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 2nd 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 yield improvement

Education

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

Changhua, Taiwan

B.S. Electrical Engineering

Jun 2001

Awards

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.