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, Docker, React, GIT, Node.js, Express, Django, Postman, MongoDB, Mongoose, SQL, Selenium, Pandas, Linux/Unix, MS Windows

Side 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 (*.xlsm) 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.