Nipuna Weerapperuma

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Education

University of Florida **August 2018 - May 2022**
BS Computer Engineering, BA Business Administration, MSEE/CE coursework GPA: 3.98

- Honors: Presidential Platinum Scholar, National Merit Scholar, Computer E Awardee
- Clubs: Freshman Leadership Engineering Group (FLEG), Gator Badminton, Culinary Arts Student Union (CASU)
- Courses: iOS Apps (Stanford), Digital Design + Logic, Reconfigurable Computing 1 + 2, Data Structures, PLC, OS

Skills & Interests

Languages: Python, Swift, C++, Java, MATLAB, JS, SystemVerilog, VHDL, Perl, C, Assembly
Tools: Git, Perforce, JIRA, Quartus, ModelSim, Vivado, WaveForms, LTSpice, Atmel Studio, MPLAB
Interests: AR/VR, UI/UX, Audiophile hardware, PC & Console modding, Entrepreneurship, Gaming, Anime

Experience

Intel **July 2022 - Present**
FPGA Software Engineer {Python, C++, Perl, Verilog}

- Drove RTL design creation using Python, Perl, and Verilog to model and guarantee timing and power specifications to customers of the business's next-generation flagship FPGA device
- Led development of Python tool suite that parses the device floorplan and automatically generates RTL design input files, enabling the team to save up to 15 weeks during the pre-silicon phase of the project
- Built test methods in C++ to collect timing and power values on silicon which are used by all validation flows running on the V93K system for the post-silicon phase of the project
- Enhanced Python data correlation tools to calculate and display frequency and voltage trends so sanity checks on timing and power measurements can be performed immediately after collection

Charter Communications (Spectrum) **June 2020 - August 2020**
Software Engineer Intern {Python}

- Created a Python tool that scrapes configuration parameters from business's SIP devices, verifies they match their expected values, and updates them to the correct values otherwise, eliminating the need for manual review by the team
- Redesigned the team's internal website to integrate the new tool's documentation along with other requested updates including team member structure and contact changes

Vision **October 2016 - February 2017**
Software Engineer (Contract) {JS, PHP, MySQL}

- Designed entirely new e-commerce website for the business, with a UI that allows customers to specify, visualize, and order custom, built-to-specification kitchen and bath cabinets
- Developed pricing model in JS, which dynamically calculates and relays prices based on the customer's unique inputs
- Co-programmed account and order systems using PHP and MySQL, which supports login tokens, stores previous orders, and deploys new order information in a CSV to a remote server accessed by the business's milling machine

Projects

iShowcase (github.com/nipunaw/iShowcase) {Swift, RealityKit}

- Curation of Swift apps developed during and after Stanford's CS193p course, ranging from card games to an art editor
- Currently developing an AR app with the visionOS SDK where you interact with and grow your own digital companion

ClariFi - Senior Capstone (github.com/nipunaw/ClariFi) {Electron, React, VHDL}

- Desktop app made in Electron and React that boosts microphone clarity by dynamically programming FPGA audio filters

Kanzen Analytics (github.com/nipunaw/Kanzen-Analytics) {Django, PostgreSQL, Dash}

- Online dashboard created in Django and Dash that scrapes, projects, and visualizes search trends for anime TV shows

Lotus (github.com/nipunaw/Lotus) {PyQT5, PyTesseract, OpenCV}

- Desktop note-taking app built in PyQT5 which incorporates a course schedule, note templates, and elementary OCR