

Brandon Vu

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EDUCATION & AWARDS

The University of Texas at Austin - Austin, TX

Bachelor of Science - Electrical and Computer Engineering

Master of Science Integrated - Architecture, Computing Systems, and Embedded Systems

Current GPA: 3.75

May 2024

Dec. 2025

Awards: March Economic Madness Winner - *The IC2 Institute*

Mar. 2022

CS Research Mentorship Program(CSRMP) Class of 2023A - *Google*

Jan. 2023 - May. 2023

RELEVANT COURSEWORK

Digital Logic Design • VLSI • Computer Architecture • Embedded Systems • Circuit Theory • Concurrent and Distributed Systems

Software Design and Implementation I/II • Software Lab • Algorithms • Matrices and Matrix Calculations • Linear Systems and Signals

TECHNICAL SKILLS

Python • C/C++ • Verilog • SystemVerilog • Cadence Tools • Java • JavaScript/TypeScript • HTML/CSS • SQL • Git • Assembly

WORK EXPERIENCE

Amazon Web Services (AWS) Seattle, WA – *SDE Embedded Intern*

May 2023 - Aug 2023

- Worked on AWS EC2 Commercial Software Services team to deliver timely resolutions and optimize performance for SAP customers' applications and infrastructure running on AWS resources including EC2 Instances and EBS Volumes
- Utilized Python lambda functions and AWS System Manager Automation Documents to develop a storage configuration check system for SAP HANA databases, providing customers insights into SAP application misconfigurations
- Provided framework to publish configuration parameters to AWS Parameter Store and AWS CloudWatch Dashboard to view system metrics and check utilizing various AWS services

Advanced Micro Devices (AMD) Austin, TX – *Design Verification Engineering Co-op/Intern*

Jan. 2023 - May 2023

- Worked on Foundry Technology and Operations (FTO) Advanced Technology team creating testing model and testbenches to enable ATE pattern generation in C++ and SystemVerilog for verification of FTO's three nanometer chiplet test chip technology
- Developed a Python-based Regression Analysis Tool to consolidate, execute, and optimize multiple patterns/test case results into a singular process, improving runtime from 3-6 minutes to 30 seconds
- Tool facilitated visual analysis of pass/fail instances through comprehensible output log interpretation and a graphical GUI for further context and validation progress of test chip as a whole

The Home Depot Atlanta, GA – *Software Engineering Intern*

May 2022 - Jul. 2022

- Collaborated, within a team of 7, to build and maintain a Return Policy Maintenance application providing access to product information and policy assignment increasing application usage by 23%
- Designed and implemented a feature enabling Excel file uploads for product data, coupled with the dynamic assignment of return policies, leveraging Java and Typescript within the SpringBoot and React.js frameworks

PROJECTS

All Digital Phase Locked Loop – *Grad VLSI 1 Final Project*

Oct. 2022 - Dec. 2022

- Researched and designed an All Digital Phase Locked Loop (ADPLL) on a 45 nm technology node that meets high performance specifications x
- Explored two different designs using a XOR Digital Phase Detector/Time to Digital Converter, Digital Loop Filter, and Digital Controlled Oscillator
- Conducted synthesis, timing analysis, and exhaustive functionality tests, including in-depth assessments of phase noise, lock time, and jitter using Synopsys VCS and Cadence Innovus

Stopwatch/Timer Display FPGA – *Digital Logic Design/Personal Project*

Sep. 2022 - Nov. 2022

- Implemented and designed a programmable stopwatch/time using RTL-design methodology, HSLMs, and digital design fundamentals
- Utilized Verilog HDL in Xilinx Vivado to program a Basys3 FPGA Evaluation Board as well as drive VGA display of the timer onto a 640x480 monitor
- Verified functionality of timer, switches, buttons, and LED's by developing testbenches in SystemVerilog

Tetris Game Project – *Embedded Systems Final Project*

Apr. 2021 - May 2021

- Designed and programmed classic Tetris game on Keil TM4C Launchpad using C language in Keil Uvision software
- Implemented interrupts, interfacing, port initialization, 4 bit ADC/DAC utilization, sound
- Showcased fundamentals game concepts in Assembly and C language, ie. movement, display, animation, sprites, collision