Carlos Georges

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Education

BACHELOR OF SCIENCE | FALL 2022 | UNIVERSITY OF NEVADA, LAS VEGAS

- **Major:** Computer Engineering
- **GPA:** 3.92
- **Relevant coursework:** Modern Processor Architecture, Digital Electronics (VLSI), Digital System Architecture, Advanced Embedded Systems, Operating Systems, Embedded Digital Signal Processing (DSP), Digital Logic Design, Synthesis & Verification using Programmable Devices, Data Structures & Algorithms, Information Coding Systems
- **TA Experience:** Synthesis & Verification using Programmable Devices (CpE 302), Second Year Seminar in Engineering and Computer Science (EGG 202)
- **Recognition:** Dean's Honor List Fall 18-Spring 22. College of Engineering scholarship recipient.

Experience

HARDWARE ENGINEERING INTERN | SCIENTIFIC GAMES | JANUARY 2022 – MARCH 2022

- Revised and released microcontroller firmware for subsystems inside various electronic gaming machines
- Created a GUI application using C# to assist with programming FTDI devices used in display adapters
- Updated schematics, PCB layouts, and BOMs to reflect a major change in subsystem architecture

LABORATORY SUPERVISOR | UNLV ECE | JANUARY 2021 - PRESENT

- Assembled over 300 kits per semester for ECE labs containing FPGAs, microcontrollers, and electronic devices
- Documented and facilitated issuance and retrieval for all lab kits each semester with a 99% property retention rate
- Maintained and inspected cleanliness and organization of hundreds of pieces of equipment in a large space

Skills

- **Programming Languages:** Python, C, C++, Verilog HDL, VHDL, MIPS assembly, Bash, C#
- **Tools:** Cadence Virtuoso, Quartus, ModelSim, SPICE, Synopsys VCS, Shell, Xcode, Visual Studio, Altium Designer
- **Technical Abilities:** Digital System Design and Verification, Mixed Signal Circuit Design/Analysis, FPGA Programming, CMOS Design/Layout/Simulation, Analog IC Design, Object-Oriented Programming, Scripting, Microcontroller Programming, Embedded Systems Design, Digital Signal Processing, RTL Design, PCB Layout,
- **Operating Systems:** Linux, Mac OS X, Windows
- **Spoken Languages:** English, Arabic, Spanish

Projects

BOOST CONVERTER

- Designed, laid out, and simulated a boost switching mode power supply (SMPS) in Cadence Virtuoso
- Configured MOSFETs to construct hysteretic control circuitry consisting of an oscillator, a comparator, and gates
- Selected off-chip components to supply above 60 mA at 12.5 V to a load with over 85% power efficiency

8-BIT MICROPROCESSOR

- Built, synthesized, and verified a functional microprocessor with several Verilog modules and testbenches
- Processor was realized and tested on an FPGA board, supporting and demonstrating 16 useful instructions

Involvement

REBELSAT | SOFTWARE TEAM LEADER | JANUARY 2022 – PRESENT

- Conducted weekly team meetings, arranged meetings with JPL developers about F' flight software
- Communicated with hardware and avionics teams to develop satellite subsystem architecture around Linux computer