

Rudy Flores Jr.

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EDUCATION

Bachelor of Science in Electrical Engineering
The University of Texas at El Paso (UTEP)

Anticipated: May 2022
Overall GPA: 3.21/4.00 | Major GPA: 3.63/4.00

Relevant Courses

Digital System Design | Embedded System Design | Electric Circuits | Signal's and Systems

SKILLS

- Advanced Knowledge in C and MATLAB.
- Working knowledge in Verilog/VHDL and FPGA Board Programing via Xilinx ISE
- Fluent in written and oral Spanish
- Linux/Centos/Ubuntu
- Adult & Pediatric CPR/AED/ Essential First Aid Certified.

WORK EXPERIENCE

Hotel Receptionist

August 2020- January 2021

The Hotel at Sunland Park Racetrack

- Check in/out guest's using PMS, encouraged loyalty program registration, maintained a clean and organized workspace and customer folio, maintained professionalism/tenacity in cases where reservations could not be found, overbooking occurred, room did not meet expectations, maintenance problems, internet connection and situations of a like manner.
- Manage hotel overnight without supervision, this requires faxing documents, performing night audits and bucket checks. being prepared to respond to fire alarms and other emergency situations. scheduling pickups or drop offs to the airport.
- Attend "Blueprint Workshops" monthly intended to improve customer service, selling tactics and phone etiquette.

PROJECTS

Braille Encoder using HDL

- Utilized digital system design experience including truth tables and K maps, such that a simplified Boolean expression was derived.
- Developed code in VHDL and Verilog Modules given the Boolean expression that was obtained.
- Programed NI Digital Electronics FPGA Board via Xilinx ISE. Through available FPGA switches a binary number up to nine could be selected and the equivalent braille number would display on a pair of seven segment decoders.

Home Security System Xilinx ISE

- Implemented Boolean functions, Boolean algebra and logic gates in order to replicate the actions exemplified by a home security system.
- Constructed a digital logic circuit via Xilinx ISE schematic simulation.
- Ran a behavioral simulation model and verified for appropriate response.

MSP432 Hotel Safe Module emulator

- Used TI'S MSP432 Microcontroller to emulate a hotel safe's functionalities.
- User was allowed to enter a 4-digit decimal number which would be inputted with 4 switches in binary, numbers 0 through 9 were permitted others would toggle an error LED and prompt the user to re-enter an appropriate digit on an LCD display.
- Upon the admittance of the final digit a lock LED would be raised after pushing the enter switch. It would continue to be set until the user entered the correct 4-digit code, resulting in termination of the lock LED and setting of an open LED. If the user entered a incorrect code they were notified through the LCD display.
- A reset switch would restart this process with a new code if desired from the open state.

Winter Classic Cluster Competition

- Worked with c2-standard-60 and a2-megagpu-1 google cluster nodes with the aim to speed up four applications regularly used for COVID-19 research namely Gromax, Namd, Lammgs and OpenFOAM.
- HPL and HPCG Benchmark's where used to determine performance of the Cluster.
- ArmForge Profiler to determine performance of our programs with compiler optimizations and Cluster configurations.