Hemal S. Patel

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Objective

Seeking job opportunities that will utilize and develop my skills as an engineer.

Education

Georgia Institute of Technology | Atlanta, GA   *August 2019 – May 2023*
Bachelor of Science in Computer Engineering, GPA 3.06
Relevant Coursework: Data Manipulation for Science and Industry in Python, Machine Learning (Python), Programming Hardware/Software System in C and MIPS assembly, Engineering Software Design, ARCH, SYS, CONC & ENGY COMP, FPGA based digital design with VHDL, Cloud Computing (AWS), Embedded Systems Design, VLSI & Adv Digital Design, IC Fabrication, Processor Design

Kennesaw State University | Kennesaw, GA   *August 2017 – May 2019*
Transfer with 54 Credit Hours

Skills

Programming: SQL, Python, C++, C programming, MATLAB, HTML, MIPS assembly language, VHDL
Hardware: ARM mbed microcontroller, FPGAs, Arduino, Raspberry Pi
Other: Cadence virtuoso, Quartus Prime, LtSpice, Athena, Vivado, Vitis
Languages: English (fluent), Guajarati (conversational)

Experience

BJ's Foodmart | Menlo, GA   *August 2016 - Present*
Owner
- Allocates the budget for paying vendors.
- Maintain inventory and restock by communicating with vendors for orders.
- Provide service to consumers by preparing food items or processing transactions.
- Maintain any certificates needed for operations (UST Operator and Servsafe)
- Assist in technical support for any issues that occur to machinery.

Projects

Digital Design Lab Final Project   *Summer Semester 2021*
ECE 2031
Team Project where we used a FPGA to design a device that is a digital ruler.
- Worked on the VHDL code to use a keypad which would switch between the functionalities of the device.
- Skills learned: FPGA, Rangefinder, VHDL

Airplane Instrument Visualization   *Fall Semester 2022*
Embedded System Design (ECE 4180)
Team Project of creating a heads-up display to help pilots.
- Worked on the barometric sensor to get the altitude.
- Helped debug IMU and GPS sensors to display the correct outputs.
- Skills learned: Using threads to refresh sensors for accuracy of data, implemented on Mbed microcontroller.

Smart Pipe System   *Fall Semester 2022- Spring Semester 2023*
Senior Design I & II
Team project to create a notification system to detect pressure and quality of water in a water pipe.
- Worked on the notification system which involved sending data to AWS using a LoRa module. Also display a site where user can see all the data point and any discrepancy in the sensors will send a warning via email.
- Skills learned: experience with AWS, Arduino, LoRa module, Pressure sensor, ph sensor, and soldering.