PHANINDRA SAI KARANAM

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Highly skilled, talented and knowledgeable **Electrical and Computer engineering** candidate with extensive knowledge in the field of **Electronic circuit Design** and **Embedded Software programming**. Looking for an entry level position to utilize my skills to solve the complex problems faced in the Industry



**EDUCATION**

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| **Bachelor of Science** –Electrical and Computer Engineering | **Aug 2014** | **– Dec 2018** | |
| University of Missouri- Columbia |  | **GPA: 3.5** | |
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| **WORK EXPERIENCE** |  |  |  |
| ***Undergraduate Research Assistant at University of Missouri - Columbia*** | **Jan 2018** | **– Dec 2018** | |

* Designed and developed algorithms for Deep Neural networks.
* Developed working Verilog module of Deep Neural Network Accelerators based on FPGA.
* Peer reviewed research papers and Journals.
* Developed Testbench modules for individual modules of FPGA based accelerator.

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| ***Engineering Intern at SRIIT Innovation cell – Hyderabad, India*** | **Mar 2016** | **– Dec 2016** |

* Worked on Test plan and verification of developed VLSI proto-types
* Collobrated in development of Competiton oriented robotic projects
* Developed kernel software for Raspberry Pi projects
* Lead a team of 4 students to design an home automation project using Android application



**ACADEMIC PROJECTS**

***Wireless Charging Station for Public areas:***

* Developed and Designed Oscillator circuit to produce a Sinusoidal wave of required frequency.
* Developed an algorithm and designed a MATLAB model to calculate the efficiency of power transmitted wirelessly.
* Designed and Developed a Control unit that controls the switching of the project using Raspberry Pi, RFID module, and Relay module.
* Developed the Firmware code for interfacing various hardware module to Raspberry Pi.
* Analyzed the performance of the Device using Multimeter and Oscilloscopes and various Consumer based surveys

***Supervisory Control and Data Acquisition System***

* Developed a TCP/IP server-client model to establish communication between Remote terminal units and Central CPU.
* Programmed the Raspberry Pi using Kernel modules to monitor the changes on the GPIO pins.
* Collaborated with a fellow student to design a SQL database to store the data from Remote terminal units.
* Implemented Multithreading and Real-time scheduling of threads.

***Gesture controller drone***

* Designed a gesture recognition module that identifies hand gesture using the accelerometer and Gyro sensor
* Developed Firmware software to interface Gesture recognition module with Arduino
* Designed and Calibrated the flight parameters of the drone
* Designed a Zigbee communication protocol between drone and Arduino base station

***Home Automation using Android Application***

* Developed an Android application which monitors the status of appliances and controls the switching of appliances.
* Designed a control unit with Arduino to process the data received from the Android app
* Designed and Developed custom PCB for the relay module and Power supply
* Designed a working efficient DC Power supply unit for the control unit and the Relay module.



**TECHNICAL SKILLS**

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Programming Languages : C, C++, C# Python, Verilog, VHDL, PLC programming, HMI programming, Embedded C

Visual Basic

Software Tools : Microsoft Office, Vivado, KEIL, Atmel studio, RSLogix, MATLAB, GIT, Virtual box,

Visual Studio, Altium Designer, Android Studio.

Databases : SQL, Sever, Oracle.

Communication Protocols : TCP/IP, UDP, Wi-Fi, Bluetooth, Zigbee, RF, GPS

Design and Simulation : LabView, Pspice, PSIM, MultiSim, VLSI design, Analog circuit design, Digital logic

Design.

Operating Systems : Windows, Linux.

Laboratory Equipment : Multimeter, Oscilloscope, Spectrum analyzer, Function generator, DC power supply

Devices : Raspberry Pi, Arduino, Intel 8051, Intel 8086, Atmel micro-controllers, ARM cortex,

NXP micro-controllers, Rockwell PLC.