



**Aswin  
Natesh**

+1 (631) 428 3320

aswinnatesh.com

aswinnatesh.venkatesh  
@stonybrook.edu

Github / Scholar

HOME RESUME

## EDUCATION

### Masters in Electrical Engineering

Stony Brook University @ New York, USA — Aug 2017 to Dec 2018 (Exp.) - IGPA 3:50

**Coursework:** Nanoscale IC Design - Adv. Digital System Design and Gen. - Computer Architecture

Adv. VLSI System Testing - Computer Architecture - System Specification & Modeling - Solid State Electronics

Cyber Physical Systems - Mobile Cloud Computing - Wireless Communication

### Bachelors in Electrical and Electronics Engineering

Anna University @ Chennai, India — Aug 2012 to Apr 2016

**Coursework:** Micro Controllers & Processors - Digital Logic Circuits - Linear Integrated Circuits

Operating Systems - Data Structures & Algorithms - Operations Research

## EXPERIENCE

### Graduate Research Assistant

Stony Brook University, New York — Nov 2017 to Present

✓ Working under Prof. Shan Lin on areas of cyber physical systems and sensor networks.

✓ Part of the Body Area Networks group developing a Secure Access System.

### Hardware Engineering Intern

TDK InvenSense, San Jose — May 2018 to Aug 2018

✓ Successfully Designed and Implemented a Hi-Speed 14 Bit 150 MSPS ADC-FPGA System.

✓ Custom designed a FIFO - IP for trigger-based data acquisition and processing.

✓ Task involved selection of ADC, FPGA, FMC & design of front-end circuits.

### Research Assistant

Solarillion Foundation, India — Jun 2016 to May 2017

✓ Part of the smart devices group working on a Low-Cost Non-Intrusive Device Identification system.

✓ Mentored undergraduate students and peers in embedded systems and hands-on circuit debugging.

✓ Technical lead in the design and development of device test-bench.

### Undergraduate Research Assistant

Solarillion Foundation, India — Aug 2015 to Jun 2016

✓ Part of the embedded systems and IoT group.

✓ Lead authored a research work on Low-Cost Wireless Intelligent Two Hand Gesture Recognition System.

✓ Technical lead in the design and development of Custom Made Sensors

### Student Trainee

Bharat Sanchar Nigam Limited (BSNL), India — Jun 2015 - July 2015

✓ Obtained hands on training in PLC, SCADA and Distributed digital control systems.

✓ Learned about various power backup systems used by the telecom industry.

✓ Developed an exposure in green building concepts and energy conservation.

### In Plant Trainee

Siemens Gamesa Renewable Energy, Chennai — Dec 2015 - Dec 2015

✓ Developed an understanding of the anatomy of wind turbines for different models

✓ Obtained training on operational safety and health hazards in the production line

✓ Studied wind patterns in India and working simulations of different systems

## SKILLS

### EDA/Software Tools

- + Synopsys Design Compiler + Modelsim
- + Virtuoso + Altera Quartus + SoC EDS
- + Atmel Studio + KEIL uVision
- + TINA SPICE

### Programming

- + **5000 Lines**: System Verilog, Embedded C, C++
- + **500 Lines**: Verilog, Python, Assembly, Linux

### Hardware Platforms

- + Altera Cyclone V + Raspberry Pi
- + Beaglebone Black + Atmel Family
- + MBED/ARM Cortex + nRF51822 BLE
- + STM Nucleo

### Bus Protocols

- + UART + USB + SPI + I2C + GPIO's
- + 433MHz RF + Ethernet + MIPs Arch.
- + Sony Cell SPU Arch.

### Sensor and Kits

- + Ultrasonic/Bulk PZT + Flex/FSR
- + NFC Tags + Accelerometer
- + AC Current/Voltage Sensing

### Bus Protocols

- + STA + JTAG + Saleae Logic Analyzer
- + Basic Lab Test Instruments

## INTERESTS

- ✓ Digital Design (FPGA & ASIC)
- ✓ Embedded Systems & IoT
- ✓ PCB & Circuit Fabrication
- ✓ VLSI System Design
- ✓ Firmware Development
- ✓ Hardware Testbench Design

## SCHOLASTIC ACHIEVEMENTS

- 2018 Top 10 BitCamp Hack 2018 - Best use of MLH Hardware
- 2018 1st/36 Hack @ CEWIT 2018 - Best use of CISCO'S MERAKI AP
- 2016 1st/200 Innovates 2016 - Student Research Day Competition
- 2015 1st/200 SVCE Innovates 2015 - Student Research Day Competition
- 2015 Finalist.. Finalist of the Anna University Titan Hackathon 2015
- 2014 Finalist.. Innovates 2014 - Student Research Day Competition

## CERTIFICATIONS

### Object Oriented Programming using C++

NIIT Limited, India - License:11CUZZZZZ9276 — Dec 2010

### Advanced Programming in 'C'

NIIT Limited, India - License:10DJZZZZZ8932 — Apr 2010

### Scientific Python

TDK InvenSense Inc. — June 2018