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## Education

<b>Master of Science in Electrical Engineering</b> 3.57/4 University Of Central Florida, Orlando, Florida.	<b>Spring 2016</b> (Expected graduation)
<b>Bachelor of Engineering in Electronics and Communication</b> 3.5 NIE Institute Of Technology, Visvesvaraya Technological University, India	<b>May 2012</b>

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## Skills

- Softwares: C, C++, Python, VB Script, Embedded C, Verilog(Xilinx). HSPICE, TCL
- Software tools: Cadence •IDE: Eclipse, CodeBlocks •MS Office •ASE •Wireshark •MATLAB

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## Academic Projects

- **Schematic and Layout design(Full custom VLSI design using Cadence):**
  - Designed schematic and layouts for digital circuits like *D-Flip flop, MUX, 8\* 16-bit Reconfigurable linear feedback shift register* etc. Performed timing analysis.
- **MICROELECTRONIC FABRICATION:**
  - Fabricated *MOSFET and BJT* in a clean room environment on Si wafer substrate.
  - Performed the necessary steps required during fabrication like: *Photo resist application, baking, spinning, Photolithography*, Emitter and collector drive-in diffusion.
  - Performed *via holes* and *oxide etching* required for the metal contact.
  - Tested and performed I-V characterization of the fabricated device.
- **OPTOELECTRONIC FABRICATION.**
  - Fabricated *LED and Photo detector* in clean room environment.
  - Fabricated *heterostructure LED* of 680 nm(Red). Performed n-contact metal deposition on GaAS structure of LED grown using molecular beam epitaxy technique. Measured the IV- Characteristics.
  - Fabricated *heterostructure P-I-N diode*.
- **Python to TCL conversion**
  - Performed *TCL to python conversion* for the existing hardware obfuscation module.
- **Advanced Computer architecture.**
  - Implemented the idea to *reduce cache line decay* using simple scalar simulator.
- **Emerging non-volatile device technologies.**
  - Learned the usage of emerging non-volatile memory technologies like memristor and spintronic devices.
  - Implemented digital potentiometer, programmable gain amplifier, programmable threshold comparator and Programmable frequency relaxation oscillator using the memristor model *in HSPICE*.
  - Surveyed the importance of spintronics devices in space applications to avoid control flow errors due to alpha particles.
- **FPGA design**
  - Learned the *routing algorithm techniques*.
  - Designed and implemented a decimal *push button counter, VGA monitor to display the image, Low pass filtering, Huffman decoder used for data compression etc. using Verilog*.

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## Software Engineer      Larsen and Toubro Technology Services      2 Years Experience

- Validated relay and reclose controls for electrical faults. (Test automation using VB script).
- Programming 8051 Microcontroller , PIC 16F883.
- 3 Dimensional mouse design.
- Validated relay control for various SCADA protocols like DNP serial, DNP IP TCP IP, MODBUS, IEC-101 and IEC-104 etc.
- GUI development in eclipse IDE using C++.
- The link for the project : <https://github.com/PavanSuta/GUI-for-the-controller>
- Developed an *employee repository app using linked list(ANSI C)*.  
The link for the project: <https://github.com/PavanSuta/Employee-Database-management->

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## Activities

- Graduate Teaching Assistant, Tutor in Computer Architecture Lab.
- Digital media coordinator Computer Architecture Lab.

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## Courses

• Microelectronic fabrication • Optoelectronic fabrication • Advanced topics in microelectronics • Full custom VLSI design • FPGA design • Advanced computer architecture • Current topics in parallel processing • Hardware security • Logic design

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## Achievements and Reference

- Developed a tool to reduce the effort of validation, *efficiency increased by 300%*.
  - Project link: <https://github.com/PavanSuta/SmartReviewer>
- Reference: Prof. Ronald Demara, Director of Computer Architecture Laboratory, UCF
  - Contact: <http://ronald.demara@ucf.edu>