

- Embedded Systems Design: Designed and developed microcontroller Based products for specific customers. Measured System performance in terms of power consumption, speed and reliability. Created Microcontroller based Testers implementing Industry specifications to assist in the Manufacturing process. Programming Language used: C/C++
- Analyzed Products with LED's, designed and implemented Circuits with LED applications. Interacted with customers to troubleshoot their LED burn out issues and have designed circuits to protect them in various applications (eg. ESD, EMI).

Coop (2004-2005)

- Cost reduction Project- Re-engineered current product, Designed and Simulated Circuits using Pspice. Created Prototype and test setups to carry out performance analysis of products.
- Designed low power circuits using linear or switching power regulators and transient protection circuits for current and future products. Also gained experience with signal generators, oscilloscopes, 8bit PIC controllers, operation of tooling machinery (Lathe, CNC, Drill Press etc.).

Education

2007 – 2009

North Carolina State University

Raleigh, NC

M.S. Electrical Engineering

Graduation: Spring – 2009; GPA: 3.60/4.0

- MBA Project Management
- Computer Architecture
- Analog Circuits & RF IC Design
- High Speed Digital Ckts
- ASIC / VLSI
- Packaging/Interconnects

2002 – 2005

North Carolina State University

Raleigh, NC

B.S. Computer & Electrical Engineering

Graduated: Fall – 2005; GPA: 3.90/4.0

- ASIC Design
- Embedded Systems
- VLSI Systems Design
- Micro Electronics
- Analog Electronics Design
- Control Systems

Other

Projects

- **FPGA / ASIC Project** – 3DIC Project, Implementing DSP (FFT) Algorithm on FPGA's, create DDR2 memory controller on FPGA's, and integrate them all in a single 3D chip stacked package. Research on size and utilization of all the FPGA resources.
- **Cache Design** – Computer Architecture project to simulate the working of a flexible cache and the memory hierarchy with pre-fetch. Performance analysis over size, area, depth of Cache system (L1, L2) and depth of Pre-fetch unit. Programming Language used: C.
- **VLSI Design Project** – Design the ALU of a Microcontroller implementing the DLX architecture. The project involved circuit (schematic) design, physical design, verification, and analysis in terms of power and time.
- **Analog Circuits Project** – Design a CMOS fully Differential OP-Amp: 80db low frequency gain, 160 MHz unity gain with 1k ohms 4pf Capacitor load. Design to meet specs over all process corners and temperature -40 – 125C.
- **ASIC design Project** – Dictionary Match Engine – (RTL) design a processor to find matches between two sets of Memories containing word data and write it to a different memory using Verilog, & Synopsys DC.
- **Senior Design Project – Automated Paintball Sentry Platform** – Automatically tracked a moving object and triggered paintball gun to target that moving object. Embedded controller 'Viper' implementing the ARM architecture was used to execute the PID control code; capture and analyze frames to detect motion using a webcam; and HCTL1100 controller embedded on a PC104 module to control stepper motors.