

## Gurunath Athalye

9548 D University Terrace Dr.  
Charlotte NC - 28262

Phone No. 704-497-6134  
[gurunathathalye@yahoo.com](mailto:gurunathathalye@yahoo.com)

---

**Objective:** To secure a full time position utilizing my knowledge and skills while achieving organizational goals

---

### Education:

- **M.S. , Electrical and Computer Science Engineering**  
[University of North Carolina at Charlotte](#) Expected May-07
  - **B.E. , Electrical Engineering**  
[University of Pune](#) Aug-04
- 

### Work Experience:

#### **Embedded Software Intern, in Handheld Products Inc (June 2006 – Dec 2006)**

- **Testing:** Software testing while pursuing established procedures, documenting all test results.
  - **Troubleshooting:** Troubleshooting deviations from expected results to determine if the deviation is a fault and if so, the nature of the fault.
  - **Documentation:** When faults are encountered, reporting them using established procedures for bug reporting.
  - **Learning Opportunities:** Software responsibilities and learning opportunities included Embedded Digital Circuit design, and familiarity with USB, RS232, Serial Communication protocols.
- 

### Assistantships:

#### **Research Assistant:**

Department of Electrical & Computer Engineering, The University of North Carolina at Charlotte spring 06

- Conducted Literature Search on the project, "Energy Harvesting" for **Goodrich Corporation**

#### **Teaching Assistant:**

Precision & Metrology Department, The University of North Carolina at Charlotte fall-05

---

### Relevant Projects and Experience:

#### **Graduate Project:**

Designed an educational board for serial and stepper motor interface with Renesas (M16C microprocessor family) board using High-performance embedded workshop (HEW) V.3.01.05

#### **Undergraduate Project:**

Controlled stepper motors through the microcontroller for different directions and different rotations to increase the work volume of robot with the help of the X-Y coordinate table. Further Motors are calibrated to stop at any position. Power and control circuit also designed for the suitable functioning of the table. P.V.G.'s COET Pune, India (July 2003-June 2004)

---

### Software Skills:

Operating Systems	Windows 9X/2000/NT/XP, Windows CE 5.0 Windows Mobile 5.0, Unix, Linux
Web Technologies	Microsoft Front Page
Languages	C,C++, Visual C (MFC , SDK), Perl
PCB Design Software	Express PCB, Capture CIS, Layout Plus
Microcontrollers / Assembly Languages	Intel 8085,8086, Renesas M16C Microcontroller
Packages/Tools	Matlab Simulink, CETK Testing Tools, Spb Benchmark, GDB, GNU

### Hardware Skills:

- Designing and Testing of Electronic Circuits.(TTL, Motor Circuits)

**Certifications:**

- “C” Programming from MCITR Pune - August 2000
- “C++” Completed Programming from Seed InfoTech Pune - February 2004 (Basic Concepts)
- “Visual C++” Completed Programming from Seed InfoTech Pune - August 2004

**Graduate Level Courses:**

<b>Advanced Embedded Systems</b>	Worked on Renesas <b>M16/62P, MSP430F1122, ATMEL AVR</b> microcontroller, <b>RTOS - <math>\mu</math>COS</b> , Digital Actuators and Sensors
<b>Fundamentals of Reconfigurable Computing</b>	Configuring and compiling <b>Linux Kernel 2.4</b> for platform FPGA. Use of <b>Xilinx Platform Studio</b> , FPGA design tools (including synthesis), C programming in Unix environment using <b>Bash 2.05 shell, Emacs compiler</b>
<b>Advanced Computer Architecture</b>	Instruction Set Architecture, RISC processors, Memory Hierarchy, MIPS, Pipelining
<b>Embedded Wireless Systems</b>	Introduction to <b>IEEE 802.15.1 (Bluetooth), IEEE 802.15.4 (LR-WPAN), IEEE 802.11 family</b>
<b>Digital Signal Processing</b>	Sampling and signal recovery in linear systems; analysis of sampled systems,; discrete and fast Fourier transforms; z-transform; discrete convolution; <b>design of digital FIR and IIR filters.</b>

**Area of Interest:**

- Wireless Embedded systems
- Real Time Operating Systems
- Linux Programming
- Device Drivers
- Board Support Package