

SANDEEP PAUDEL

171/29 Gautam Buddha Marg, Anamnagar,
Kathmandu, Nepal
Telephone: +977-9841825065
Mobile: +977-1-4257775

Website: www.sandeepaudel.com.np
Email: sandeep_paudel@hotmail.com

OBJECTIVE

To research and develop in the field of electronics.

EDUCATION

- *Bachelors of Engineering in Electronics and Communication*
 - **Kantipur Engineering College**, Lalitpur, Nepal
- *High School Education*
 - **St.Xaviers' College**, Kathmandu, Nepal

QUALIFICATIONS

- **2+ years** of experience as an **Research and Development(RnD) Engineer** in RnD Department of Real Time Solutions Pvt. Ltd
- *Conducted Research in various fields in electronics and communication.*
- *Developed microcontroller firmware ,circuit and PCB design for 8052 and ARM microcontrollers.*
- *Expert in C programming.*
- *Tutor of Embedded System various electronics concepts.*
- *Supervised six final year projects for the students of different Engineering Colleges.*

TECHNICAL EXPERTISE

- *8051 and ARM (LPC 2103) Microcontrollers.*
- *Expert in: SDCC, C, Visual C++, KEIL, Altium Designer 6, Proteus, Matlab*
- *Have Experience with: GSM, GPRS, GPS, CDMA, MIFARE, RF Communication, Inverter Design, HTML, PHP, CSS etc*

PROFESSIONAL EXPERIENCE

Research and Development Engineer(January 2006 – till date) at Real Time Solutions(RTS) Pvt. Ltd.

Major Projects undertaken at RTS

TCP/IP to UART Bridge

- *LPC2103 (ARM-7) based embedded system protocol converter between the Ethernet and the Serial(RS-232) devices.*
- *Hardware Components: LPC 2103, Microchip Ethernet Controller ENC28J60, I2C Atmel EEPROM, LCD*
- *My Contribution: Firmware development, Circuit Design and PCB Design*
- *Tools Used: Altium Designer 6, Keil*

Mifare Smart Card Reader

- *Radio Frequency Identification(RFID) Reader based on 8051 microcontroller which reads the serial number of the card and outputs in the Weigand format.*
- *Hardware Components: AT89S52, MFRC500*
- *My Contribution: Firmware development, Circuit Design and PCB Design*
- *Tools Used: Altium Designer 6, Keil*

ISP Programmer Solution (Hardware and Software)

- *Hardware to be connected in the LPT Port of the computer.*
- *Software Designed in Microsoft Visual C++ Based ISP programmer for Atmel S-Series Microcontrollers such as AT89S51,AT89S52,AT89S8252,AT89S53.*
- *My Contribution: Circuit Design and Software Design*
- *Tools Used: Altium Designer 6, Microsoft Visual Studio*

AES-128 Encryption

- *C based AES-128 Encryption library used in several projects for the encryption of data based on Rijandael algorithm.*
- *My Contribution: Library Development*
- *Tools Used: Keil*

MODBUS Remote Terminal Unit RTU (RS485)

- *Slave devices (Temperature Sensors and Motor Control Unit) for the Radiant Floor Heating Temperature Control System*
- *Solid State Control used for motor control.*
- *DS18S20 Temperature Sensor used*
- *My Contribution: Firmware Development, Partial Hardware Development*

RF-Module

- *A transceiver module interfacing RF-12B for short range communication between several nodes.*
- *Hardware Components: P89V51RD2 microcontroller, RF-12B transceiver*
- *My Contribution: Hardware Design, PCB Design, Firmware Development*

Beside these I've contributed in many projects such as Remote Data logger, GPS module, Temperature and Humidity Sensor module etc

Projects supervised at Kantipur Engineering College

- *RoboCon Project which won the “**Best Idea**” award at the National Robotics Competition 2008*
- *Remotely Controlled Security System*
- *Data logging and Communicating System*
- *Voice Based TV remote Control*
- *GPS Based Navigation system for the blind*

Projects supervised at Kathmandu Engineering College

- *Data Logging System (Hardware and Interfacing Software)*

Projects supervised at Cosmos Engineering College

- *Flood Forecasting System (Remote Data logging and communicating project)*

(running projects for Kantipur Engineering College)

- *Voice Based Wheel Chair*
- *ROBOT Controlled by Voice*

Other undertakings

- *Taught “Microcontroller Programming” for final year students at Kantipur Engineering college.*
- *Acted as a Lab Instructor for “Microprocessor Based Instrumentation” for the 3rd-year students of Kantipur Engineering College.*
- *Taught “Embedded Systems” for the students of KIST College.*

My Academic Projects

- *Vehicle Tracking and Navigation System*
 - *Won the “**Best Final Year Project**” of 2006 at Kantipur Engineering College.*

- *An embedded system project for tracking of vehicles on a digital map*
- *A point on a Google Map shown according to the longitude, latitude information sent by the system with the help of GPRS modem to the remote web server.*
- *Major Components: GPS, GPRS, JAVA, 8051 microcontroller, php*

- *Robo Soccer Project which participated in the National Robotics Competition 2004*
- *Robo Shooter Project which won the “2nd Runners up Trophy” at National Robotics Competition 2005*
- *Computer Graphics project on 3D Sphere (Turbo C++).*
- *Student Result processor based in C programming language.*
- *Other projects such as Telephone No. Logger, Water Level Indicator, Device ON/OFF control etc.*

PARTICIPATION

- *A 3-day Training for Tutors conducted by Kantipur Engineering College*
- *A workshop on Robotics*
- *ITCD Conference as an organizer*
- *LOCUS, annual project showcase organized by Institute of Engineering*