Vibhor Jain,
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Professional Objective :

To do a challenging and exciting summer internship project in a field of my research interests.

Research Interests:

Microprocessor Architecture, Embedded Systems Hardware design, Microelectronic circuits, Analog and Digital VLSI Circuit Designing, Robotics

Education:

- Presently in 3rd year of my BTech - MTech Dual Degree Course in Electrical Engineering Department at IIT Kanpur with a CPI of 8.8 (on a scale of 10)
- Class 12th, ISC 2002: 97.25% from Boys High School, Allahabad, India (CISCE Board)
- Class 10th, ICSE 2000: 95.80% from Boys High School, Allahabad, India (CISCE Board)

Work Experience:(for details please visit http:/home.iitk.ac.in/student/vibjain/projects.html)

- **ROBOCON'04:** In this prestigious robotics competition, we were to design autonomous robots for picking up blocks from certain fixed positions and to place them at a given spot. For controlling these robots, I used Rabbit Core Microprocessor (R3000) with its RCM3400 prototype board and Dynamic C programming language, MIP and L298 motor controllers, Maxon Motors etc. We were the semifinalist in this competition.

- **Programmable Blocks:** This project aims at developing a cost effective physical programming tool for programming machines, robots, motor controllers and even household electronic appliances without the use of computers. PIC microcontrollers and L298 motor controllers were used for this purpose alongwith other chips and components. PCBs of the blocks and the base controller were designed on ORCAD Capture and Layout Plus.

- **Micromouse:** This autonomous robotics competition was a part of Yantriki at IIT Bombay, 2004. We were supposed to make an autonomous robot that can solve any given maze. For accomplishing this task we developed an algorithm for the same and used PIC16F877 microcontroller for implementing the same.

- **RFIDs:** This ongoing project aims at creating an identification system using Radio Frequency Passive Identification Chips. MCRF451 passive RFID chips are being used.

- FFT Package (part of Fundamentals of Computing Course): This JAVA software aimed at finding the FFT, DFT, convolution, wavelet transform etc. of the entered data.

- **Mechanical Equivalent of a gramophone (part of Manufacturing Processes Course):** This project was done under the manufacturing processes course in second year in which we designed a mechanical model of a gramophone. In this project, rotatory motion provided by the user was converted to a spiral motion by the use of bevel gears, rack & pinions, pulleys etc.

- **Participated in:**

1. **Micromouse, Yantriki** at IIT Bombay in 2004: (Described above)
2. **Endeavour, Techkriti** at IIT Kanpur in 2004: Programmable Blocs (Described above)
3. **ECDC Techkriti** at IIT Kanpur in 2004: Designed circuit for making a playable shooting game on the CRO screen
4. **ECDC Techkriti** at IIT Kanpur in 2003: Designed circuit for making a playable version of Tic-Tac-Toe game on the CRO screen

Professional Courses Done:

Introduction to Microelectronics
Introduction to Electrical Engineering
Fundamentals of computing
Engineering Drawing
Introduction to Electronics
Control System Analysis
Digital Signal Processing*
Signals, Systems and Networks
Power Systems*
Principles of Communications*
Manufacturing Processes
Digital Electronics and Microprocessors*
Introduction to Robotics*

* denote courses to be completed before summer 2005.

Technical Skills:

- Software: Have experience of C, C++, JAVA, MATLAB, PSpice, MPLAB IDE, MICROCAP, Dynamic C, ORCAD Capture and Layout Plus

- Hardware: Have worked with PIC16F877 microcontroller, Rabbit Core and RCM3400 microprocessors, MIP10 motor controller and other hardware chips

Accomplishments and Awards:

- Won the **National Talent Search Examination Scholarship** in 2000.
- Won the **Kishore Vaigyanik Protsahan Yojana (KVPY) Scholarship** in 2000.
- Was awarded certificate of merit by GoI in 2000 and 2002 on the basis of board results.
- Selected among the top 200 students in National Physics Olympiad, 2002.
- Won the Physics Talent Search Exam conducted by Harishchandra Research Inst, Allahabad in 2002
- Won the Maths Talent Search Exam conducted by Harishchandra Research Inst, Allahabad in 2000 & 2002.

Extra Curricular:

BRiCS (Build Robots Create Science): Member of BRiCS team and have conducted a large number of junk and robot making workshops in various parts of India

- Coordinator Electronics Club 2004-05
- Secretary of Electronics Club 2003-04.
- Secretary ECDC, Techkriti – 2003

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References:
Provided on Request