Nirav Bhan
Electrical Engineering
Indian Institute of Technology, Bombay

09007016
UG Third Year (B.Tech.)
Male
DOB: 27/05/1991

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	9.47
Intermediate/+2	Maharashtra State Board	Swami Vivekanand Junior College	2009	85.50
Matriculation	Maharashtra State Board	Swami Vivekanand High School	2007	87.07

ACADEMIC ACHIEVEMENTS

Achievements :

- Secured **All India Rank of 98** in IIT-JEE 2009 amongst more than **3,80,000** students
- Secured **All India Rank of 28** in All India Engineering Entrance Examination (AIEEE) 2009 amongst **10,00,000** students
- Cleared the **NSEP**, **NSEC** and **NSEA** exams, hence qualified for participation in the Indian National Olympiads in Physics, Chemistry and Astronomy
- Received a gold medal in **Indian National Physics Olympiad**, and selected among **Top 37 physics students** of the country to be part of the Orientation cum Selection Camp for the International Physics Olympiad(IPhO)
- Attended a physics-enrichment camp at **Homi Bhabha Centre for Science Education**, for which only 30 students were selected from all over India
- Won gold medal in challenging mathematics examination **Pradnya** in 5^{th} standard **,** also cleared the exam in 8^{th}

Scholarships :

- Received the prestigious **KVPY** scholarship from Indian Institute of Science, Bangalore
- Received scholarship in the National Talent Search Examination**(NTSE)** in class 10, **awarded only to top 500 students in India**
- Received scholarships in the Maharashtra Talent Search Examination in class 8 and 9
- Awarded CBSE merit scholarship for excellence in AIEEE

RELEVANT COURSES

Core

- Microprocessors
- Foundations of VLSI CAD
- Digital Systems
- Communication Systems
- Control Systems
- Digital Signal Processing
- Digital Communications
- Analog Circuits
- Power Electronics
- Electrical Network Theory
- Signals and Systems

Non-Core

- Computer Programming
- Data Analysis and Interpretation
- Complex Analysis
- Linear Algebra
- Differential Equations
- Electricity and Magnetism

Minor (Computer Science)

- Data Structures and Algorithms
- Discrete Structures
- Operating Systems

MAJOR PROJECTS

Pacoblaze Microcontroller (May – Jul '11)
Guide: Professor Sachin Patkar, Electrical Engineering Department , IIT Bombay

- Modified Pacoblaze – a software microcontroller, to do multiplication in 8-bit Galois field
- Thoroughly studied the architecture of the microcontroller and created a new instruction for multiplication
- Modified the Assembler to parse the instruction correctly

GPS Navigator (May – Jul '10)
[Summer Project under Electronics Club]

- Made a device which used co-ordinates from a GPS module and displayed the user's position on a computer screen using a Graphical User Interface
- Programmed a micro-controller(Atmega-16) to store waypoints in EEPROM memory
- **Made a Gui using Qt 4.0** , a free Gui development framework
- Prepared a comprehensive documentation of the project. Details about the project can be found here: **http://stab-iitb.org/blog/?p=109**

Synchronous CDMA [Course Project] (Mar – May ’11)
Guide: Professor Sachin Patkar, Electrical Engineering Department , IIT Bombay

- Created a miniature version of synchronous CDMA communication using basic digital components like ICs and logic gates
- Allowed 2 transmitters and 3 receivers to communicate simultaneously over a single data bus

Mini-national UID Project [Course Project] (Jul – Nov '09)
Guide: Professor Deepak B. Phatak , Computer Science Department , IIT Bombay

- Developed a system capable of uniquely identifying an individual on the basis of finger-prints. It can be used for various tasks, like taking attendance.
- Was part of the Classification and Consolidation team. Developed a program for processing the finger-print, extracting identifiable characteristics(minutia) from it, and storing them.
- Developed an independent algorithm for thinning of the fingerprint

EXTRA-CURRICULAR ACTIVITIES

- **Convener of Math and Physics Club, IIT Bombay (2010-2011)**
  - Organized different events such as lectures, seminars, competitions, workshops related to math and physics
  - Mentored 4 teams to successful completion of physics-based projects
- Participated in **various robotics competitions** in first year, such as Robocon and F-1
- Enjoy playing sports like Table-Tennis and carrom
- Enjoy solving puzzles and mathematical problems

TECHNICAL SKILLS

- Programming Languages - C/C++, Java, Verilog HDL, html
- Software - Scilab, LTSpice, Eagle, Qt, ModelSim, Xilinx ISE Design Suite
- Micro-controllers of Atmel AVR Family , Microprocessor - 8085