



Madhu Kiran P
Electrical Engineering
Indian Institute of Technology, Bombay
Specialization: None

100070046
UG Third Year (B.Tech.)
Male
DOB: 13th July 1992

| Examination | University | Institute | Year | CPI / % |
|-----------------|-----------------------|-------------------------|------|---------|
| Graduation | IIT Bombay | IIT Bombay | 2012 | 9.00 |
| Intermediate/+2 | Board of Intermediate | Narayana Junior College | 2010 | 97.20 |
| Matriculation | CBSE | Vijnana Vihar School | 2008 | 94.00 |

SCHOLASTIC ACHIEVEMENTS

RANKS SECURED

- **All India Rank 4** in IIT-JEE (Joint Entrance Examination) (2010)
- **All India Rank 14** in AIEEE (2010)

OLYMPIADS

- Achieved a Gold Medal in Indian National Physics Olympiad (2010)
- 2nd Rank at National Level in National Science Olympiad (NSO) (2009)
- 3rd Rank at National Level in International Mathematics Olympiad (IMO)

SCHOLARSHIPS

- Shortlisted for Aditya Birla Scholarship (1 among 20 throughout the nation)
- Shortlisted for OPJEMS Scholarship
- Receiving Merit-cum-Means Scholarship of IIT Bombay

ACADEMIC PROJECTS

SUMMER PROJECT (Guided By Prof. V. M. Gadre)

Summer 2012

- Generalized the Fractional Fourier transform to obtain a new transform which was used to determine the parameters of a Quadratic Chirp Signal.
- Discretized the transform and modified it so as to be able to work in finite time domain.
- Simulated a chirp signal in MATLAB and applied the transform to obtain its parameters and hence proved the working of the transform.
- Awarded an **UNDERGRADUATE RESEARCH AWARD** for the contribution made.

COURSE PROJECTS

- SNAKE GAME Semester 2 (2nd Year)
 - Made the classical Snake game using a FPGA (an integrated circuit design which is programmable) and a 128 x 64 Graphical display
 - Programmed the FPGA using a hardware description language: Verilog
 - Led a team of three members
- BLOXORZ (A MIND GAME) Semester 1 (1st Year)
 - Created a mind game with 3D Graphical User Interface (GUI).
 - Used EzWindows API (Ubuntu) to create the GUI.
 - Synthesized algorithms to auto-generate the maps required for the game in C++.
 - Led a team of 4 members
- IMAGE PROCESSING Present
 - Filtering and enhancing a given image of brain via wiener filter and wavelet transforms in Matlab.

TECHNICAL COMPETITIONS

MAP IT (YAHOO'S HACK U COMPETITION)

Semester 2 (2nd Year)

- Was solely responsible to develop an android application (MapIt) using the Google Maps API which shows the landmarks of an institution. The application synchronizes data from an online database.
- Also developed the web interface required to update the landmarks.
- Worked in a team of four.

TRACKMANIA (IIT BOMBAY)

Semester 1 (1st Year)

- Assembled a remote controlled bot which overcomes the obstacles in the path (given in problem statement) and does so in least time.
- Achieved 6th position out of 200 – 300 teams.

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| WORK EXPERIENCE | SUMMER INTERNSHIP AT LOCON SOLUTIONS | Summer 2012 |
| | <ul style="list-style-type: none"> Developed an android application that shows the bus routes of Mumbai offline. It takes the initial and final locations of travel and gives the bus route on a map. Obtained the bus route information from various sites using python. Generated a sql database. Synthesized algorithms for computing the bus routes and wrote the required sql queries. Used Eclipse Android SDK to develop the application, used Google Maps API for the maps Was solely responsible for the entire project | |
| | TEACHING ASSISTANT (LINEAR ALGEBRA) | Semester 2 (2 nd Year) |
| | <ul style="list-style-type: none"> Taught a class of 45 students a course in Linear Algebra (MA 106). Interacted with the students, aroused their enthusiasm along with clarifying their doubts | |
| | MENTOR (QEA EDUVENTURES) | Semester 2 (2 nd Year) |
| | <ul style="list-style-type: none"> Delivered lectures on career guidance, mainly concentrating on engineering at various places like Hisar (near Delhi), Raipur, Mumbai, Vijayawada (AP) Interacted with some IIT-JEE aspirants, gave suggestions and guidance for JEE preparation | |
| POSITIONS OF RESPONSIBILITY | LITERARY AND DEBATE SECRETARY (HOSTEL) | (2 nd Year) |
| | <ul style="list-style-type: none"> Planned and organized various intra hostel events like quizzes, debates, word games etc. Initiated new events to increase the enthusiasm of hostel inmates like: <ul style="list-style-type: none"> Conducted the first ever inter hostel informal debate Initiated online word games at hostel level with tempting prizes Started a new hostel blog where inmates post their experiences regularly In my tenure hostel achieved 2nd position in Speaking General Championship after long time. Awarded Special Mention for the contribution made as a Secretary. | |
| | DEPARTMENT DESIGN SECRETARY | Present |
| | <ul style="list-style-type: none"> Solely responsible for all the design aspects of departmental magazines, certificates, posters, logo, t-shirts, brochures etc. Made welcome video for freshers, to familiarize them with department, using Adobe After effects | |
| | SCHOOL CAPTAIN (HEAD BOY) | |
| | <ul style="list-style-type: none"> Was elected as the school head boy in tenth grade. Represented the students and acted as a bridge between the students and teachers. | |
| PROGRAMMING SKILLS | LANGUAGES | |
| | <ul style="list-style-type: none"> C, C++, Java, HTML, CSS, Python, Verilog, JavaScript | |
| | DEVELOPMENT ENVIRONMENTS AND SOFTWARES | |
| | <ul style="list-style-type: none"> Eclipse (Android SDK), Google APIs, Latex, MATLAB, Adobe Dreamweaver, Photoshop, After Effects, Quartus | |
| OTHER ACHIEVEMENTS | <ul style="list-style-type: none"> Gold Medal at chess Regionals (Hyderabad Region), Played at national level. Led the regional team which consisted of three members. Active member of Bharat Scouts and Guides. Received Rajyapuraskar Award. Participated in many community service activities. Received a degree of Rashtrabhasha Praveena in Hindi at the age of 12. | |
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| RELEVANT COURSES | ELECTRICAL ENGINEERING | |
| | <ul style="list-style-type: none"> Image processing, Signals and Systems, Digital circuits, Analogue circuits Microprocessors, Network theory, Power electronics and Machines, Electronic Devices | |
| | COMPUTER SCIENCE (MINOR) | |
| | <ul style="list-style-type: none"> Data Structures and Algorithms, Discrete Structures, Operating Systems | |