



Suyash Dusad
Energy Science & Engineering
Indian Institute of Technology, Bombay

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Dual Degree
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Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay, Mumbai	2011	7.67
Intermediate/+2	CBSE	Saint Soldier's Public School	2007	82.66
Matriculation	CBSE	Maheshwari Public School	2005	90.20

SCHOLASTIC ACHIEVEMENTS:

- Ranked among the **top 0.3%** of the **0.4 million students** appeared for **IIT-JEE 2008**
- Ranked among the **top 0.1%** of the **0.8 million students** appeared for **AIEEE 2008**

INTERNSHIPS:

Modelling of Continental Scale Renewable Energy System

[June-Jul'11]

Aarhus School of Engineering, Aarhus University, Denmark

- Expanded and improved** the current data basis with the new data made available by National Oceanic and Atmospheric Administration (NOAA)
- Developed a **python based conversion tool** of solar radiation data to solar power generation identifying important aspects for accurate and sound conversion
- Carried out a survey on the available **Solar PV panels and Concentrated Solar Power Plants** to get an exhaustive list that suggests best panels for different locations around continents

CMC Ltd. (Tata Consultancy Services), Mumbai

[May-July'10]

- Worked as an **Analyst Trainee** as part of the **Green IT** initiative taken by the company which is an IT consultancy firm
- Carried out an intensive **Market Research** on the latest technologies (Cloud Computing, Use of Bio Gas as Energy source, Hot Aisle – Cold Aisle Cooling etc.) in the field of Green Data Center
- Presented a report on **case studies** based on different execution problems faced by companies (HP, Cisco etc.) in implementing these technologies
- Presented a **detailed report** on the steps/considerations to be implemented while building a Green Data Center

IMPORTANT PROJECTS UNDERTAKEN:

Understanding the impact of lifestyle on carbon footprint, CTARA (Team of 3)

[March – Dec'11]

- Prepared an **exhaustive list of equivalent carbon footprint factor** covering maximum sources of GHG emission occurring in day to day activities
- Interviewed** 150 households across various **socio-economic sectors** in rural, peri-urban and urban areas nearby Mumbai analyzing the relation between lifestyle practices and carbon footprint for the various sources of GHG
- Compiled a **detailed report** comparing average per-capita carbon footprint of rural, peri-urban and urban areas with similar socio-economic status to get the **emission patterns** in India
- Co-authoring** a research paper with suggestions of an equitable distribution and reduction model

Green Gym, Energy Innovation Project (Team of 3)

[Jul-Nov'11]

- Designed and built a **Shoulder Press Gym equipment** which stores energy from the exercise
- Modeled** the equipment to convert the transitional motion to rotational motion and stored the energy using a **generator and a battery**
- Incorporated a **gear system similar to that in a cycle** to store the energy from the equipment
- Stored Energy used for the electricity requirement of the gym

Modelling for Efficiency of a Corrugated Solar Cell

[Aug-Nov'11]

- Simulated a model** in Matlab for finding the range of angles at which the rays should fall on a corrugated solar cell for different days and time to get a better efficiency from the cell
- Designed an **Information flow diagram** to find the optimal angle at which light rays should fall on the corrugated cell to get the maximum efficiency

RO Photovoltaic (PV) Solar Water Purifier (Team of 2)

[Feb-April'09]

- Devised and Fabricated a RO water purifier which used **reverse osmosis** method using solar PV panel
- Remodeled** purifier such that pressure required to purify water through the RO membrane was generated by a pump that used solar energy as its source

Microcontroller Based Digital Organizer (Team of 2)**[Feb-April'10]**

- Devised and Fabricated a digital organizer which stores timetable and also works as an alarm clock
- Used **microcontroller(ATMEGA 16)** as storage device
- Introduced the concept of using Snooze as the alarm for the next class

Carbon Auditing of IIT Bombay (Team of 5)**[Dec'10-Dec'11]**

- Performed annual Carbon Audit of IIT Bombay to identify primary sources of CO₂ emission in the campus
- Organized campus-wide survey for data collection among residents as part of **self-initiated** project
- Identified and suggested emission reduction techniques for nearly **25% reduction** from present levels which is presently being penned down as a research paper for various publication

Coding Project: SNAKE using C++ (Team of 3)**[Sep-Nov'08]**

- Devised and implemented an algorithm for a **GUI based** game of **SNAKE**
- It offered various levels of play with varying **speed and mazes**

SOFTWARE SKILLS:

- **Programming Languages** :C++, HTML, Python, Matlab
- **Operating Systems** : Windows, Linux, Mac OS

POSITIONS OF RESPONSIBILITY :**Founding Member and Marketing Manager, Helios 2012****[July '11 -Present]***(Annual festival of Department of Energy Science & Engineering at IIT Bombay))*

- Working in a 2 tier team of over 40 members to initiate and execute **Helios'12** aimed at spreading awareness about sustainable energy practices and a platform for energy enthusiasts to work together on the pressing energy crisis
- Leading a two-tier team of students to oversee the marketing of the event
- Pursuing a target of INR 1 million as the marketing budget

Internship Coordinator, Energy Science &Engineering**[May'10-April'11]**

- Working in a team of 24 IC's of the **Practical Training(PT) Cell** which serves as a bridge between 1500 students and companies as well as universities
- Responsible for all practical training or internships activities for the Department of Energy Science &Engineering
- Identified & secured new opportunities by marketing the IITB brand
- Laid down the **initial framework** for the working system of PT Cell that year
- Streamlined the application procedure for universities which is acclaimed by them

Cultural Secretary, Energy Science and Engineering**[May-April'10]**

- Organized **social events** like Teacher's Day, Department Trip, Kurta Day etc. to which students responded
- Coordinated in different seminars and events held in the department fest **Energy Day'10**
- Coordinated events of International Conference and Exhibition for Advanced Energy Research (**ICAER 2009**)

Coordinator-Marketing Team, Mood Indigo'09**[May'09-Jan'10]**

- Contacted different companies for sponsorship and generated funds above **INR 0.5 million** for the cultural fest
- Led a team of 15 organizers to ensure proper planning and execution of the on-campus **advertising campaign** of several companies at Mood Indigo

EXTRA-CURRICULAR ACTIVITIES:

- Built a **solar car** in **Nexus(Techfest, IIT Bombay) 2008** – Solar Photo-roller Competition
- Part of hostel team in **Hockey & Cricket** Inter Hostel General Championship
- Part of **Dramatics team** of hostel in Performing Arts Festival(IITB's biggest Inter Hostel extracurricular activity event) – awarded **2nd prize**
- Lead Actor in 'History Repeats', a play staged at the Annual Theatre Festival of IIT Bombay
- Part of hostel team in Fine Arts Inter Hostel General Championship
- Actively involved as an **Energy Students Association(IITB)** member in the **Outreach** program that involves raising awareness about Energy in schools in Mumbai
- Associated with **Group for Rural Activities (GRA), IIT Bombay**
 - Represented the GRA and NSS(**National Social Service**) team for a visit to Vihigaon village(Maharashtra)
 - Conducted a **survey** about the basic facilities available and their lifestyle