



IIT Bombay

Yash Shah

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Education:

Programme	Degree	Major	Minor	Year	CPI
Undergraduate	B.Tech+M.Tech	Energy Engineering	Industrial Design	4th	8.37/10

SCHOLASTIC ACHIEVEMENTS AND AWARDS:

- Pursuing Minor in Industrial Designing, from Industrial Design Centre IIT-B, with **minor CPI of 9.5/10**
- Awarded **Institute Organisational Colour** (*highest award given to non-graduating student*) for exemplary contribution towards internships and training related activities of IIT Bombay (2012)
- **1 of 5** selected across India for **Lal Bahadur Shastri Indo-Canadian Scholarship**; received a cash award of CA\$ 6000 (2012)
- 1 of 20 selected across IITs for **University of Alberta Research Award**; received a cash award of CA\$ 5000 and offered an internship opportunity at University of Alberta, AB, Canada (2012)
- Among the 1st student to be awarded an **AP grade** for outstanding performance in Special Design course Project. (2011)

LEADERSHIP EXPERIENCE:

Institute Secretary of Academic Affairs - Student Head of Practical Training Cell, IIT B: (2011-2012)

- **Student Head**, selected and led a team of **25 Internship Coordinators**, responsible for internships of 1500 students across 10 departments
- Achieved **over 100% y-o-y growth** in the total number of internships, more than 50% increase in the number of companies and **more than 150% increase** in non-technical internships
- Formulated the first ever recruiter policy, played a pivotal role in conceptualising and forming the Student Policy; efforts directed towards making it more student friendly
- Developed strategies to carry out recruitment processes in an efficient and streamlined manner

INTERNSHIP AND TRAINING:

University of Alberta, Summer Internship Programme, Canada: (May-July 2012)

Sustainable Energy Research Lab, Alberta Innovates Energy and Environmental Solutions (AI-EES).

- **Developed the Demand Tree Model** (energy source to end use) for Alberta oil refineries incorporating energy intensities of all the processes
- **Suggested various GHG mitigation scenarios** that can be used to forecast the GHG mitigation trends

University of Victoria, Winter Internship Programme, Canada: (Dec 2012-Jan 2013)

- **Designed and developed** an experimental setups to measure thermal properties of phase change materials; to be used for solar thermal storage applications
- Identified the major factors responsible for experimental error and heat losses

Process Engineer, PRAJ Industries Limited: (Apr- Jun 2011)

Was part of the commissioning team, gave engineering solutions to problems faced during the guarantee run of GLOBUS SPIRITS and NUWAY distillery plants, Punjab and Rajasthan, India

- Suggested alternate hybrid refrigeration scheme for process cooling utility
- Estimated **100 m³ of water savings** based on the proposed refrigeration scheme for a 50 klpd plant
- Estimated a **profit of Rs. 4 per bottle of liquefied CO₂** which is generated in excess via this scheme
- Suggested changes are being implemented in a phased manner

- Developed a code to read and generate *Quant Volatility Indices* from Market caps via Bloomberg

MENTORING EXPERIENCE:**Institute Student Mentor**

(April 2012-present)

- 1 of 82 Institute Student Mentor; selected on basis of balanced extra-curricular and academic achievements and peer reviews
- Currently mentoring **10** undergraduate freshmen with diverse backgrounds on a one-to-one basis for a smooth transition into IIT life

International Student Buddy

(Nov 2012-present)

- **Guiding 8 international exchange-students** to provide social support, assistance and guidance through one-on-one meetings, social and cultural activities

PROJECTS:**Single axis tracking mechanism:-** (Guide: Prof Rangan Banerjee, Prof J.K Nayak, IIT B)

(May-Aug 2010)

Summer Internship Project under National Solar Thermal Power testing, simulation and research facility.

- Developed working model of **low power consuming** single-axis optical solar tracker.
- Simulated this model under critical circumstances and **originated ways to improve its efficiency.**

Flexible and Portable Solar Concentrator:- (Guide: Prof. S.B. Kedare)

(July-Nov 2012)

Designed and manufactured a light weight, compact and affordable (less than US\$20) solar concentrator, for household cooking and heating purposes; specifically for rural India

- **Formulated the testing procedure** for selection of reflective materials for the concentrator
- Identified the key performance parameters
- **Conceptualised the concentrator design** and selected the materials to be used
- **Conceptualised the mounting structure design** which will enable manual solar tracking with least effort

Sustainable, affordable and adaptable society model:- (Guide: Prof. B.K. Chakravarthy)

(Aug-Nov 2011)

In collaboration with Holcim Foundation (Switzerland), ACC Cements (India) and IDC, IIT Bombay.

- Used “*Collaborative model for Innovation*” to conceptualize the model of a sustainable and affordable coastal society; incorporating several energy saving and green technologies
- **Proposed new climate based design** of houses of Wadi Village (*Karnataka, India*) for pleasant indoor temperatures, lighting and ventilation

Heartbeat counter:- (Guide: Prof. Rajesh Gupta, IIT B)

(Mar- Apr 2011)

- Designed and developed a working circuit of low cost (Rs. 150) heart beat counter
- Fabricated a touch response heartbeat sensor
- Programmed the circuit to detect the generated cardiogram and count the pulses correctly

RELEVANT SKILLS

- Software Packages: SolidWorks, MATLAB, C/C++, P-Spice, SEQUEL, LEAP, Mathematica, MS Excel
- Machines: Lathe, Shaping, CNC, Injection Molder, Milling, Drilling

OTHER CO-CURRICULAR ACTIVITIES AND HOBBIES:

- Awarded certificate of Social Service by Global Cancer Concern India (GCCI), for participating in campaign for creating awareness and raising resources for the cause of cancer patients
- Avid pianist, performed at **37** different social and cultural occasions
- Mentored over 20 high school students for competitive exams
- Compered various performance-based events at Mood Indigo, Annual cultural festival of IIT Bombay