



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	8.53/10

SCHOLASTIC ACHIEVEMENTS AND AWARDS:

- Selected to **represent India in global energy summit** by Total SA (to be held in Paris), to discuss and examine key energy issues and challenges, with **global leaders** and **experts** from the business and research communities
- Pursuing Minor in Industrial Designing, from Industrial Design Centre IIT-B, with **minor CPI of 9.5/10**
- Awarded **Institute Organizational Colour** (*highest award given undergrad 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 \$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)

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 experimental setups** and performed experiments 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

Quantitative Analyst, Quant Capital (Aug -Oct 2012)

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

Process Engineer, PRAJ Industries Limited: (Apr- June 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

PROJECTS:

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

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.**

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

(Mar- Apr 2011)

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

Seminars:

- Technical and Economic analysis of cooking energy needs of rural India (Spring 2013)
- Analysis of Energy Policies in BRIC nations (Autumn 2013)

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

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 and assistance through one-on-one meetings, social and cultural activities

RELEVANT SKILLS AND COURSES

- **Software Packages:** SolidWorks, AutoCAD, MATLAB, C/C++, P-Spice, SEQUEL, Mathematica, MS Excel
- **Courses:** Introduction to Computational Finance and Financial Econometrics, Foundation of Business Strategy, Financial Engineering and Risk Management, Introduction to Finance, Introduction to Micro and Macro Economics, Energy Economics, Energy Management, Operations Analysis

EXTRA CURRICULAR ACTIVITIES

- Awarded **Certificate of Social Service** by Global Cancer Concern India (GCCCI), for participating in campaign for creating awareness and raising resources for the cause of cancer patients
- Avid pianist, performed at **47** different social and cultural occasions

- Mentored over 30 high school students for competitive exams