



Yohan Nikhil V Mathew
Aerospace Engineering
Indian Institute of Technology, Bombay
Specialization: None

07D01017
Dual Degree (B.Tech+M.Tech.)
Male
DOB: 04/10/1989

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	7.42

INDUSTRY EXPERIENCE

Design for India –Nageshwara Charitable Trust NGO (Jan '11 – Apr '11)

Low-cost design of a sanitation unit for rural areas in the Nagpur district

- Conducted **regular on-site visits** to understand social mind-sets and user requirements
- Developed a new design for the septic tank, **optimizing waste disposal** processes
- Reduced cement requirements to **bring down costs** to Rs.9000 per unit; a reduction of 25%
- Earned the approval of experts from rural technology bodies like NGNK and CTARA for the design

Centrum Group – Process improvement in Wealth Management Division (Dec '10 – Jan '11)

- Executed a market study of the private banking industry in India and determined major growth sectors
- Performed a **SWOT analysis** of the company, primarily identifying 2 areas for potential improvement
 - *Portfolio building*: Introduced **client segmentation** approach and **quantitative investment-risk profiling**
 - *Product offerings*: Proposed institution of **research teams & advisories** for various alternative investments

Industrial Collaboration –Efficiency enhancement of Siemens Power plant (July '10 – Nov '10)

- Conducted experiments on a 1:7 scale model to determine primary sources of aerodynamic losses
- Conceptualized a **boundary layer injection system** to improve airflow; verified using CFD simulations
- Realized **13% increase in efficiency metrics** on installation of the injection system

NACIL(formerly Air India)–Investigation of issues in Maintenance processes (Dec '09 – Jan '10)

- Analysed flight scheduling, inventory management & repair procedures and identified major bottlenecks
- Presented a report to improve aircraft **turnaround time** for both short-term and long-term stopovers

ACADEMIC PROJECTS

Applications of Microgravity combustion in Micro-combustion Research (June '11 – present)

- Researched flame characteristics and combustion phenomena in microgravity and micro-scale conditions
- Currently devising a theoretical link that could explain little-understood processes in micro-combustion

Conceptual Design of a 150-seater Commercial airliner (Aug '10 – Nov '10)

- Designed wing & tail assemblies; Generated **baseline configuration** through integration of subsystems
- Estimated **life cycle cost** per plane and performed **design trade studies** to optimize for cost effectiveness

POSITIONS OF RESPONSIBILITY

Editorial Board Member, Insight – IIT Bombay's student media body (May '11 - present)

Leading 110 student reporters as part of a 11-member panel reaching out to over 8000 students & professors

- Launched website additions such as 'IIT-BBC' & 'App Fundae Series'; monthly **views grew from 4000 to 18000**
- Instituted **initiatives for freshmen** like Freshman's Campus Guide, Internship session & Journalism Workshop
- Set-up a grievance forum to ensure accountability of institute bodies and elected student representatives
- Organized **open houses & panel debates** involving concerned authorities to tackle unresolved student issues

EXTRACURRICULAR ACTIVITIES

- *Swimming* – Completed **6-hr endurance swimming** event in '08 and '09, covering **4.5 km and 10 km**
- *Electronics* – Created a high voltage, high frequency plasma globe using a self-designed switching circuit
- *Social Service* – Mentored 8 students at the Shantimandiram Home & oriented them towards higher education
 - Initiated a Donation Drive to the Sister Nivedita Orphanage; brought in over 200 clothes & toys