	Nishant Khanduja	09001013
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	Aerospace Engineering	**UG Third Year (B.Tech.)**
	Indian Institute of Technology, Bombay	**Male**
		DOB: 11-05-1990

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	7.22
null	State Board	B.S. Vidhyapeeth	2008	88.00
Matriculation	State Board	saraswati Vidhya NIketan	2006	91.00

ACHIEVEMENTS

- Placed in **top 35** students in mathematics in JEE'09 among 4,00,00 candidates
- Secured **4TH Rank** among 1,00,000 candidates that appeared in **RPET'09**
- Secured **3rd Rank** in **Senior Group** among 30,000 candidates in **State Environmental Quiz'05**
- Placed **2nd** in **Rapid Fire** among 80 schools in **World Wild Festival'05**

PROFESSIONAL EXPERIENCE

ZEUS NUMERIX *May '11-July'11*	- Simulated three-dimensional, transonic, turbulent flow over the **Onera M6** wing and validated them using results from similar experiment conducted by **NASA** - This simulation was presented in national workshop titled "**Computational Fluid Dynamics: Design and Analysis**", attended by more than 25 **scientists** and professionals - Developed a code in PHP for automatic generation of V-Card for Zeus Numerix employees

POSITIONS OF RESPONSIBILITY

AEA COUNCIL MEMBER *Mar'11-present*	- **1 of 7** members in Aerospace Engineering Association(AEA) responsible for **logistics, public relations and marketing** of events - Developed **website** for the association incorporating an **e-library** and an online collection of **research publications** done by the aerospace engineering department - Proposed idea to publish **newsletter** for freshmen to publicize achievements and research activities of the department; resulted in 6 freshmen taking up projects in the department - Organizing various events like cultural night to increase the interactions across the batches
AAWAZ, PUBLICITY MANAGER *Mar'11-present*	- Led a 5 member team to publicize Aawaz-the Hindi newsletter of IIT Bombay through regular e-publicity and poster campaigns - Revamped the **Aawaz website** to make it more informative and interactive - Launching weekly videos of Top News @ Campus, covering all current affairs in the institute - Instrumental in video coverage of events like **Anna Hazare Anti-Corruption Movement**, Performing Art Festival and the development of the **UID project** model in the institute
COORDINATOR, WEB AND CREATIVE'S *Apr'10-Jan'11*	- Managed a team of 10 volunteers that conceptualized & designed the website for Techfest '11 - Designed **webpage** for Workshops which registered **40,000 hits** - Instrumental in Techfest's **India Un-mute campaign** encouraging youth to provide solutions for the upliftment of the underprivileged India - Successfully facilitated **network installation** throughout the institute resulting in uninterrupted internet access to all the participants during the festival
ORGANIZER, MOOD-INDIGO *OCT'09-DEC'09*	- Worked with the Creative's core team to conceptualize and execute **publicity campaigns** and **ambience** for Mood Indigo'09 through creative advertising, posters and fine arts - Worked in **Competitions group** to organize contests like one act play, street play

KEY PROJECTS

UID PROJECT *Aug'09-Nov'09*	- Developed a **beta software prototype** under **Prof. D.B. Phatak** to be used in the institute as a downscale of the **Unique Identity Project** undertaken by **Government of India** - Developed an algorithm to map the fingerprint with database to recover details
IMPROVISATION OF IITB SECURITY SYSTEM *July'10-Nov'10*	- Analyzed the security system to identify shortcomings and submitted an advisory report to The Chief Security Officer of IIT Bombay to overcome the faults - Conceptualized a **novel security system** and conducted technical and economical feasibility analysis to prevent thefts and hire efficient security guards - Proposed **main gate security arrangement** to reduce traffic bottleneck which got implemented

	OTHER PROJECTS
TRUCK SEAT SUSPENSION	• Modeled a **fourth order system**-Truck Seat Suspension using **MATLAB** • Simulated model against sinusoidal, square wave and step input using **SIMULINK**
RC PLANE	• Made fully functional **Remote Controlled Plane** using RF circuit under the guidance of **Prof. Sudhakar** of aerospace engineering
CHUCK GLIDER	• Made an un-powered aircraft **Chuck Glider** and achieved **maximum endurance** while working under the guidance of **Prof. Sudhakar** of aerospace engineering
	EXTRA-CURRICULAR ACTIVITIES AND AWARDS

TECHNICAL	• Designed and fabricated remote controlled car; secured **11th** place (out of 90 teams) in Wireless Racing Cars Championship organized by Technic, technical club of IIT Bombay
	• Demonstrated **fully operational boomerang** in the boomerang competition in Zephyr'09; the success led to **the appointment to conduct boomerang workshop** in Zephyr'11
	• **Programming Skills**
	    C/C++, Python, HTML, HTML5, CSS, Java script
	• **Softwares:**
	    Matlab/Simulink, Scilab, Adobe Photoshop, Adobe After Effects, Sony Vegas, Microsoft Office, Linux Open Office
	• **Operating Systems**
	    WindowsXP/Vista/7, Macitosh, Linux from various distributors.

CULTURAL	• Actively involved in the production sets design for **Performing Arts Festival'11**; Awarded **PAF Special Mention;** Team stood **1st** in production and **2nd** overall • **Played** lead role in the hostel entry (Black Magic) for **Film Making** GC '10 • Participated in **Hindi Creative Writing** General Championships,'10
SPORTS	• One of 26 probables selected in the **Inter-IIT Cricket Camp**'09 • Was a part of **runner-up** hostel team in Cricket General Championship'11 • Member of **winning freshmen team** at inter-hostel Cricket General Championship'10**.** • Part of **runner-up** team of Hostel Three Cricket League'09
SOCIAL	• Member of **SAATHI**-Support group for **LGBTQ** in IIT Bombay, to help and reach out to people to come to terms and help them reach their potential • Member of **Udaan**-Student Outreach Programme to create awareness about aerospace engineering among school students. • Teaching Mathematics to IIT JEE aspirants for the last 1½ year • Co-founded **Sakshar**: teaching mess workers and housekeepers basic mathematics and money management
	COURSES UNDERTAKEN
MATHEMATICS COURSES	• **Basic Algebra**: Groups and Ring theory, Homomorphism, Cyclotomic polynomials • **Numerical Analysis**: Interpolation, LU factorization, Euler and Range-Kutta method, numerical solutions of elliptical, parabolic and hyperbolic equations • **Differential Equations**: Laplace transformation, shifting theorems, Legendre's equations and Legendre polynomials, D'alembert solution of wave equations • **Linear Algebra**: Abstract vector spaces, Eigen values and Eigen vectors • **Calculus**: Gradient and directional derivatives, Lagrange multipliers, Jacobians, Divergence and curl, Theorems of Greens, Gauss and Stokes
CORE COURSES	Propulsion, Aerodynamics, Control Theory, Introduction to Aerospace Engineering, Solid Mechanics, Engineering Design, **Aircraft Structures Mechanics**, Fluid Mechanics, Thermodynamics. **Modeling and Simulation**, **Experimentation and Measurement** , **Engineeering Graphics and Drawing**
Non-core Courses	**Computer Programming and Utilization**, Overview Of Macro and Micro Economics, **Data Analysis And Interpretation**, Introduction to Electrical and Electronics circuits, Classical Mechanics, Introduction to **Quantum Mechanics,** Sociology
	INTEREST
HOBBIES	Listening Music, Video Editing, Trekking