



Nishant Khanduja
Aerospace Engineering
Indian Institute of Technology, Bombay

09001013
UG Third Year (B.Tech.)
Male
DOB: 11-05-1990

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	7.38
null	State Board	B.S. Vidhyapeeth	2008	88.00
Matriculation	State Board	saraswati Vidhya Niketan	2006	91.00

ACHIEVEMENTS	
<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Modeled a fourth order system-Truck Seat Suspension using MATLAB Simulated model against sinusoidal, square wave and step input using SIMULINK
RC PLANE	<ul style="list-style-type: none"> Made fully functional Remote Controlled Plane using RF circuit under the guidance of Prof. Sudhakar of aerospace engineering
CHUCK GLIDER	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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, Macintosh, Linux from various distributors.
CULTURAL	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 , Engineering 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