



SURAJ KUMAR
Civil Engineering
Indian Institute of Technology, Bombay

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UG Third Year (B.Tech.)
Male
DOB: 10.04.1991

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.50
Intermediate/+2	CBSE	Delhi Public School	2008	88.40
Matriculation	CBSE	Jawahar Navodaya Vidyalaya	2006	90.60

PROJECTS

“THE TOWER OF BABYLON” <i>International competition organized by Global Alliance of Technological Universities</i>	April to June 2011
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- Designed a Low cost, Functional, Innovative, Sustainable and Aesthetically appealing **Tea Kettle** shaped Coffee-Tea Shack using only waste and nature friendly local materials to bring the best out of waste with a budget of only 1000 \$.
- Provided a potential and functional rainwater harvesting model to solve future water crisis problem .
- Awarded *Certificate of Excellence* for outstanding performance in GlobalTech Student Competition.

Transit Trip Planner Algorithm Development	Guide: Prof. Vedagiri	Ongoing
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- Designing a Transit Information System (**TIS**) that uses Global Positioning System (**GPS**) technologies to integrate Web serving, GPS processing, network analysis, and database management.
- Finding a **feasible** path that links a given origin node to a given destination node and **minimizes** the sum of its arc costs.

IIT Bombay Unique Identification Project for Fingerprint Recognition	Guide: Prof. Deepak Phatak	Autumn 2009
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- Worked with a 20-member team for consolidation and classification of data which involved C++ concepts of multi-dimensional arrays.

Economics Project	Guide: Prof. Haripriya	Autumn 2009
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- Learned strategies and market terminology during Economics course project on mobile companies' market share structures.

SCHOLASTIC ACHIEVEMENTS

- *Topped* in my district in 10th board.
- Among the top .2%out of 1millionstudents who appeared for All India Engineering Entrance Exam.
- Among the top .1%out of 1 million students who appeared for IIT JEE 2009.
- Got a certificate from CBSE board for being selected in .1% *topper* of India in English.
- Got KPMG scholarship of amount 1,140\$ on merit cum means basis for two consecutive years .
- Achieved A grade in all structural engineering courses and geotechnical courses.

INDUSTRIAL EXPOSURE

- *Central Water and Power Research Station* , Pune.
 - Analyzed the optimization of port and harbour design by studying port model of Mumbai.
 - Experienced long term changes in river platform, bed level, and *flood discharge analysis* of river Ganga.
 - Learnt bank protection works like *revetments*, *pitching*..
- On Site **Training** at a construction site in Chandivali (Mukesh group of company)

Learnt about column preparation and its position in multi story buildings. Basics of roof preparation and use of fulcrum.

- Visited *Bandra Worli Sea Link*, and analyzed the cable-stayed bridge with pre stressed concrete via duct approaches.

TECHANICAL LABS

- **Solid Mechanics** : Tension test on mild steel and cast iron rods using Universal Testing Machine (UTM), Compression and shear test on Neoprene pad specimens, Torsion test on round mild steel and cast iron rods. Compression test on plane concrete cube and cylinder, Evaluation of Poisson's ratio on mild steel, Measurement of strain by electrical resistance strain gauge (cantilever beam).
- **Design of Structures** - Location of structural members, Load calculations and preliminary design, *Computer analysis* of buildings, *Design* and drawing for various Structural members.
- **Soil Mechanics lab** - Identification of soils, Determination of physical properties, Consistency limits, Determination of compaction characteristics, permeability and free swell tests.

POSITIONS OF RESPONSIBILITIES

CO-ORDINATOR, E-CELL 2011	<ul style="list-style-type: none"> ➤ Managed and brought together talented entrepreneurs and professionals of different profiles to present ideas and collaboratively bring these ideas to reality by developing a business plan, a prototype and a presentation, all in one weekend through the iWeekend. ➤ Worked on E-Garage & Eureka (Asia's largest B-plan competition) to nurture ideas and Hatch Businesses from the Campus.
CO-ORDINATOR, TECHFEST 2011	<ul style="list-style-type: none"> ➤ Coordinated the event "Junkyard wars" aiming to innovate the best design out of waste with a vision towards the sustainable development and to solve future waste disposal problem.

COURSES UNDERTAKEN

TRANSPORTATION STRUCTURE GEOTECHNICAL HYDRAULICS	<ul style="list-style-type: none"> ➤ Traffic Analysis and Design, Transportation Engineering, and Transportation Engineering Lab ➤ Engineering mechanics, Solid mechanics, Advanced solid mechanics, Structural mechanics, Design of Concrete structure, Design of Steel structure, Materials and Structures Lab ➤ Soil Mechanics-1, Soil Mechanics Lab, Soil Mechanics-2, Soil Mechanics -2 ➤ Water Resource Engineering, Hydraulic Engineering, Hydraulic Engineering Lab
MATHS	<ul style="list-style-type: none"> ➤ <i>Calculus, Linear Algebra, Ordinary and Partial Differential Equations, Probability and Statistics, Optimization, Human Resource Management</i>
SOFTWARE PROFICIENCY	<ul style="list-style-type: none"> ➤ Operating System: Windows and Ubuntu. ➤ Software skills: MS Office, Scilab, C/C++, Sumo ➤ Software used- MS-Office, Adobe Photoshop, 3Ds Max, After Effects and many other basic Windows software.

EXTRA -CURRICULAR ACTIVITIES

- Member of National Sports Organization (NSO).
- Represented my school in basketball, cricket and volleyball.