FREDERICK BENNY

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Educational Qualifications

YEAR	DEGREE / CERTIFICATE	INSTITUTE / SCHOOL, CITY	CGPA / %
2011	B. Tech in Mechanical Engineering and M. Tech (spl. in	Indian Institute of Technology, Kharagpur	7.6 / 10 CGPA
	Manufacturing Sciences) (5-yr Dual Degree Program)		(upto 8 semesters)
2006	Andhra Pradesh State Board (Class XII)	Visakha Junior College, Visakhapatnam	92.9 %
2004	CBSE Board (Class X)	Timpany Secondary School, Visakhapatnam	89.4 %

Work Experience/Industrial Internships

- > Volkswagen AG Research Lab, Shanghai (Research & Development) (May, 2010 July, 2010) [Internship]
 - Worked on the scouting and benchmarking of Li-Ion batteries for production of new Hybrid vehicles.
 - o Designed an intelligent knowledge base using semantic media wiki system to provide machine interpretability to the data.
 - Programmed test procedures, analyzed results to judge the production lines of various cell manufacturers.
 - o Tested new market cells, checking their reliability and analyzing their performance parameters.

Larsen & Toubro, Mumbai (Technology Development Centre) (May, 2009 - July, 2009) [Internship]

- One of the two students selected to work on the upgradation of the powerpack system for a tele-operated tracked vehicle.
 - o Thermal analysis and determination of cooling components to be purchased for optimal functioning of the vehicle.
 - Developed 3D models of components and determined optimum position of cooling system, to give maximum efficiency.
 - o Designed and performing calculations for new engine, transmission, cooling setup and air filtration system.
 - Was offered a full time position at the end of a successful internship.

Projects Undertaken

- Laser Engineering, Dept. of Mechanical Engineering, IIT Kharagpur (July, 2010 Present)
- Working on **surface hardening of materials using laser beams** and analyzing the effects of self quenching on thin sheets.
- The successful results of the project could lead to the introduction of an **advanced manufacturing technique** for industries, producing **better results for lower costs** than the present methods.
- ➤ Robotics, Dept. of Mechanical Engineering, IIT Kharagpur (Jan, 2010 May, 2010)
 - Helped build an **8-bit microprocessor based robot** employing IR sensors, to discover the optimal path through a maze.
- Responsible for **developing the algorithm** of the robot and also **writing the instructional code** for its operation.
- Soft Computing, Dept. of Mechanical Engineering, IIT Kharagpur (July, 2009 May, 2010)
 - Neural network based mappings of robot dynamics, to simplify the time varying systems in robotics by introducing intelligence in a purely mechanical system and optimize its motion.
 - Managed to find the optimum parameters of the hybrid Neural Network to be used for minimum error, while optimizing the computational complexity.

Positions of Responsibility

- ➤ One of 4 **executive members** of the organizing team of **KGP Cyber League** (2009-2010), responsible for conducting KCL 2.0, a technical event comprising of workshops on 3D Animation & Game Engine designing and cyber gaming. (Leading to the upcoming *KCL 3.0*, a national level event, integrated with *Spring Fest 2011*)
- **Vice Prefect** of **one of the four houses** in school. (2003)
- > Science quiz team Head in secondary school, which took part in inter-school quiz events. (2004)
- Led a **4 member team** which made a working contraption using scrap material in the event *Nirman* during *Kshitij 2007.*

Achievements

- Responsible for acquiring **sponsorship worth Rs 50,000**, as executive member of KCL 2.0 (2009), a technical event at IIT KGP.
- > Secured an **ALL INDIA RANK** of **1901** in **GATE 2010**, securing a percentile of **96.8%**, being awarded scholarship by MHRD.
- > Recipient of **ESSA Scholarship**, awarded by the Indian Army, Government of India.
- Ranked 14/85 at the end of the 1st semester in the department and 134th (out of 850) at institute level)

Extra Curricular Activities

SPORTS	Passionate Scuba Diver , with an impending Open Water Certification at the end of 2010.	
	Member of bronze winning Open IIT and Inter Hall Basketball Team, earning the title of Honorable	
	Mention in hall credits.	
	Reached the quarter final rounds in Corporate Go-Karting Championship , held in Mumbai, 2009.	
	Part of gold winning Inter House Football Competition in high school.	
	Achieved Gold, in Open IIT Dramatics 2008-2009.	
STUDENT	Part of the Inter-Hall Elocution Team of R.P Hall, IIT Kharagpur.	
GROUPS	Member of the Guest Reception Team for the institute's annual competition, Illumination 2010 .	
	Responsible for interacting with the judges and elucidating each section of the hall's presentation to them.	
	Voluntary Service at the National Service Scheme for 2 years, conducting surveys in villages, interacting	
COMMUNITY	with the underprivileged and spreading awareness about vital issues like AIDS, family management etc.	
SERVICE	Received Letter of Appreciation from Help-Age India for raising funds for elderly & needy	
	A regular blood donor at the State Blood Transfusion Council.	
OTHER INTERESTS	Formula 1, Photography	