

Nikhil Somani | 07EE1016

Final Year Undergraduate Student
Department of Electrical Engineering
Indian Institute of Technology – Kharagpur

nikhilsomani.iitkgp@gmail.com

Phone no: +91 9232581584

<http://sites.google.com/site/battinikhil/home>

Educational Qualifications

Degree/Certificate	Year of Passing	Institute	CGPA/%
B.Tech in Electrical Engineering	2011	Indian Institute of Technology, Kharagpur	8.41/10
ISC	2007	M.P.Birla Foundation H.S.School, Kolkata	93%
ICSE	2005	M.P.Birla Foundation H.S.School, Kolkata	95%

Select Projects

- **Robosoccer, IIT Kharagpur** (2009 - 2010)
 - Robosoccer is one of its kind societies in India with single motive to excel in the challenging field of robosoccer.
 - It requires extensive usage of artificial intelligence and highly optimized hardware for success.
 - This year we were the only Indian team to participate in the FIRA robot soccer world cup 2010.
 - The hardware design of robots is being considered for a patent.
- **Wireless Monitoring and Control of Power Systems, IIT Kharagpur** (2008 - 2009)
 - Software developed for the control station which could monitor and control wireless devices
 - It could also perform offline and real-time simulations of a power system.
 - The demo version of this software named Power Network Simulator released by PowerSys Technologies Pvt. Ltd.
- **Use of neural networks and genetic algorithms to reduce bandwidth requirement for satellite imagery** (2009)
 - This project involved designing algorithms for artificial coloration and super-resolution using soft computing tools like neural networks and genetic algorithms.

Internships

- **SLAM (Simultaneous Localization And Mapping) for industrial automation, Summer Internship at TU Munich** (2010)
 - The task was to use SLAM techniques for autonomous navigation in highly cluttered indoor industrial environments.
 - The implementation was done on two robots –an industry standard mobile robotics platform and a quadcopter.
 - The project was demonstrated to AUDI.
- **SLAM for autonomous farming, Summer Internship at University of Thessaly, Greece** (2009)
 - This project is a part of the EU FutureFarm project, the largest farm automation project in Europe.

Positions of Responsibility

- **Convener, Robocup Challenge @ India 2010. (www.robocup.in)** (Nominated) (2010)
 - This event is the affiliated Indian League for the international RoboCup event.
 - It also features a conference co-hosted by IEEE Kharagpur section.
 - Responsible for creation of *Kharagpur RoboSoccer Students Group* under SRIC for managing the RoboSoccer project and this event.
 - MoU signed with RoboSoft Systems for conducting robotics workshops across the country.
- **Captain, Hardware Modelling Team, Patel Hall of Residence** (Nominated) (2010-2011)
- **Head, Technology Robotics Society** (Nominated) (2009-2010)

Awards and Achievements

- Certificate of Appreciation for participation in Robocup Challenge @ India 2009.
- Selected for fully sponsored industrial visit called “Bosch On Track 2009” organized by Bosch in Bengaluru.
- Certificate of Appreciation for being a finalist in on-spot Analog and Digital circuit design contest, Anadigix in Kshitij 2010.
- Certificate of Appreciation for being a finalist in ACM certified on-spot programming event Overnite in Kshitij 2010.
- 2nd Prize in Nightshift, Kshitij 2009, an on-spot robotics competition certified by the Institution of Mechanical Engineers.
- 3rd Prize in Envision 2009, a Product Design competition.
- Best Fresher award in an international online programming event ‘Mission Mars’ in Kshitij 2008.
- Finalist and only team from IIT Kharagpur in IMAGE, an image processing based robotics event in Kshitij, 2008.
- Among the 25 students who were selected for Bachelor of Statistics Course in Indian Statistical Institute, Kolkata (2007)
- National Top 1% in National Standard Examination in Physics and Chemistry(2006)