

Cover Letter

March 29, 2013

To
Division of Student Affairs,
Rochester Institute of Technology,
Rochester, NY 14623

Dear Sir/ Madam,

I am writing this letter to apply for the graduate assistantship opportunities at Rochester Institute of Technology. As requested I have enclosed a complete job application consisting of a resume, three references and two essays. The opportunity provided here in the listing is very interesting and I believe that my strong technical experience and education will make me a very competitive candidate for this position.

I have completed my Bachelor's in Electronics & Telecommunication Engineering from MGM College of Engineering and Technology, Navi Mumbai, India in the May 2012 and currently working as a research intern at the Aerospace department, Indian Institute of Technology, Bombay.

I hope my experiences and academic qualifications meet the requirements of the graduate assistantship.

Please see my resume for a detailed information.

I can be reached via email at i.abhilash90@gmail.com or my cell phone, 91-9930231344.

Thank you for your time and consideration. I will look forward for a positive reply.

Thank you.
Yours sincerely,

Abhilash M Iyer
Address: A-3, Anjali Darshan, Ambika Nagar, Dombivli (W), Thane, India.
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Tel: 91-9930231344
Email: i.abhilash90@gmail.com

ABHILASH IYER

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Ambika Nagar, MG Road,
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Maharashtra, India.

Contact: 91 - 9930231344
Email: i.abhilash90@gmail.com
URL: <http://about.me/abhilashiye>

Education:

Bachelor of Engineering - Electronics & Telecommunication Major - 65.38% (Aug 08 - June 12)
Mahatma Gandhi Mission's College of Engineering and Technology (MGM CET), University of Mumbai, India.

Higher Secondary School - 83.50% (Feb 08)
(PCM – 89%)
Maharashtra State Board

Projects:

Aerial support during calamities - Quadrotor: (<https://www.youtube.com/watch?v=32X5TyAKMKo>)

- Designed a four rotor flying machine, Quadrotor, that had an inertial measurement unit involving an accelerometer and a gyroscope interfaced with the microcontroller in the Arduino platform, and camera on top for video surveillance.
- Project qualified for All India Young Engineer's Humanitarian Challenge 2012 by IEEE Bangalore.
- Project was awarded a special guidance by experts from Tata Institute of Fundamental Research.

Solar Boat:

- Created a boat with a solar engine which had a capability of storing solar energy and using it to travel through the dark areas like tunnels.
- Project qualified as the top 30 in IIT Bombay Solar Splash competition in Techfest 2010.

Microcopter (Ongoing):

- Currently assisting a Bachelors degree project on designing a Microcopter system, a small scale Quadrotor, to achieve higher agility and control in flight. Design of Quadrotor is miniaturized and an onboard power supply and an Inertial measurement unit is planned.

Research Experience: (Ongoing)

- Research Assistant, Control and Dynamics Lab, The Centre for Aerospace Systems Design and Engineering (CASDE), Department of Aerospace Engineering, Indian Institute of Technology, Bombay.
- Guide: Prof. Hemendra Arya, Dept. of Aerospace Engineering, IIT Bombay. (<http://www.aero.iitb.ac.in/~arya/>)
- Work: Hardware loop Simulations for Collaborative missions and obstacle avoidance, (February - June 2013)

Honours and Achievements:

IEEE Humanitarian Challenge 2012: (<http://youngengineers.ieeebangalore.org/2011-winners/>)

- Aerial support during calamities - Quadrotor project received an acclamation as **India's top 10** humanitarian problem solving projects which was evaluated by experts from Texas Instruments and BOSCH.
- India's top 30** project to qualify for online training by Prof. William Oakes, Purdue University on project management.
- Received special funding from IEEE Bangalore & qualified for IEEE TV presentation.

Statement of Accomplishment, Introduction to Artificial Intelligence, (*Advanced track*)

- Online course by Stanford Engineering
- Course duration: Oct - Dec, 2011
- Instructors: Prof. Sebastian Thrun & Prof. Peter Norvig, Stanford Engineering

Technical Papers:

A. Iyer, S. Sharma, *Inertial Measurement and Filtering of a UAV Flight*, International Journal of Scientific Research and Engineering, Vol 4, Issue 2, February 2013 edition. (<http://www.ijser.org/onlineResearchPaperViewer.aspx?Inertial-Measurement-and-Filtering-of-a-UAV-flight.pdf>)

A. Iyer, S.Sharma, *Inertial Measurement and DCM Matrix Algorithm*, (submitted to International Conference on Recent Trends in Information Technology and Computer Science, Mumbai, 2012)

Technical Competitions:

VIMANTRA 2012 (National Instruments, India) :

- Participated in 9th annual national level technical paper contest
- Abstract on '*Second Generation Inverters*' got selected among top 40 abstracts out of the total 1007 abstract submissions.
- Qualified for online training on LabVIEW

ITRIX:

- Participated in Advance Level Robotics workshop conducted by ThinkLABS, SINE IIT Bombay
- Covered topics related to autonomous robots like various type Actuators, their drivers, sensors and feedbacks and interfacing them with microcontroller.
- Successfully built an autonomous **SUMO wrestling robot** during the workshop.

Haptics Workshop:

- Participated in the Haptics workshop held by Technophilia Pvt Ltd held in IIT Bombay
- Covered the basics of AVR Microcontrollers, and involved making a **robotic arm** which would imitate the actions of our hand.

Skill Set:

- **Programming Languages:** C, C++, Java, Embedded C
- **Microcontrollers:** 8051, PIC Microchip, Atmel AVR, ARM Cortex M3
- **Microprocessors:** 8085, 8086,
- **Software Packages:** EAGLE, MATLAB, AutoCAD, Multisim
- **Tools used:** TortoiseSVN, GitHub
- **Design software:** Photoshop

Extracurricular Activities:

- Taught mathematics and physics to students classes 11th and 12th from June 2011 to September 2011.
- Worked as a Technical core member for the successful conduction of the National level College Technical Festival "Tech Arete 2010". Our team built a **Goldberg machine**. I was also a member in the Sponsorship Committee of the Festival.
- Worked as **Coordinator** for the successful conduction of Inter-College Technical Festival "CHRYSLIS 09" held under MGM-IEEE on March 2009. Helped Organize a competition called "PYRAMID", for wired robots.
- Active member of the IEEE chapter of the college.
- Active member of Aeroquad, multicopter open source community. <http://aeroquad.com/content.php>