Amitabh Shrivastava

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Examination	Institute	Year	CGPA/%
Bachelor of Science(Research) Major: Physics, Minor: Biology	Indian Institute of Science(**IISc**[1]) Bangalore, India	2015	7.2 / 8.0
Intermediate/+2 Phy, Chem, Math, Comp Sci	Christ Church Boys', Jabalpur [CBSE]	2011	89.6%

Publications

"An Experiment on Projectile Motion" -Amitabh Shrivastava, M K Raghavendra, K P Ramesh
Resonance ISSN 0971-8044, v. 20, no. 6, p458, May 2015
This inexpensive learning aid is being used to train high-school teachers at the Talent Development Center, IISc.
"Sparse detector based silhouette and range sensor" -Amitabh Shrivastava
to be submitted to IEEE sensors Journal, project website: www.technicallywild.wordpress.com

Key Scholastic Achievements

Mar 2016 **Intel IoT Roadshow**[2], *Bangalore*.
Secured runners up place for prototyping a spelling aid for dyslexic kids, as a part of team of two.

Jan 2015 **MIT Media Labs Design and Innovation Workshop**, *Gandhinagar*.
As the team lead of four, prototyped and presented a theft resistant bag for the urban environment.

2013 Awarded **Gold Medal**[3] in the National Graduate Physics Examination(NGPE).
2011 Ranked among the **top 0.4% nationally** in the IIT Joint Entrance Exam.
2011 – 2015 Recipient of the prestigious Kishore Vaigyanik Protsahan Yojana (**KVPY**) fellowship.
2011 Secured **national rank 47** in National Science Talent Search Examination.
2011 Secured **national rank 81** in National Science Olympiad.
2011 Secured **national rank 59** in National Cyber Olympiad.
2008 – 2011 Recipient of National Talent Search Examination(**NTSE**) Scholarship.
2006 Secured **national rank 2** in the Nationwide Biotechnology Olympiad.

Experience

Aug 2015 – Sept 2016 **Senior Systems Engineer**, *SuperSuit*, San Jose, CA.
SuperSuit is the world's first wearable gaming platform, designed to promote free play while adding strategy and depth to play. It has been showcased in leading international conferences CES'16, MWC'16. I presented the product in the Bay Area **Maker Faire'16 and TechCrunch Disrupt '16**.
I was responsible for ideation and making prototypes. Amongst the prototypes I built were a gesture controlled RC car, haptic feedback vests and looks-like, feels-like prototypes of the Suit. I learnt to use Atmel Studio for ARM programming and mastered laser cutting and SMD soldering. I also had significant design inputs vis-à-vis user experience and ergonomics. Being closely involved in both design and testing, I understood the lean iterative cycle of development, prototyping and testing.

Sept 2013 – July 2015 **The Engineer Guy**, *Center for Ecological Sciences(CES)*, IISc, Under the guidance of Dr. Vishwesha Guttal and Prof. Renee M. Borges.
During the last two years of my undergraduate studies, I had the enviable position of being the only student with an office. I developed and fabricated tools for ecological research on self-imposed strict deadlines, often going from idea to prototype within a week. Working on a shoe string budget, I fabricated a low-speed **wind-tunnel** and wing-beat frequency analyzer to study insect flight, a multi-rotor and a fixed wing **UAV** for studying plant growth patterns, a rig for **3D-tracking** mosquito flight and underwater gates for studying fish decision making. I take pride in the fact that many of these are still seeing active use in research.

[1] IISc is the highest ranked Institute of higher learning in India
[2] Intel IoT Roadshow is the largest hardware hackathon in India
[3] Awarded to 5 students from amongst thousands of applicants.

Mar 2014 – July 2015 **Sparse Sensor Based Silhouette detector**, *CES, IISc*, Undergrad thesis project.
Designed and fabricated a passive infrared detector to measure the silhouette of an object such as an elephant to an unprecedented accuracy. Presented the prototype in Student Conference on Conservation Science, 2014, Bangalore. Currently drafting a paper on the same and considering field trials to measure elephant demography.

May 2015 **Remote controlled electric skateboard**, *Personal project*.
Designed and fabricated an electric skateboard, and used it as the primary means of transportation around campus. The project was featured in **IBN7** national news and multiple newspaper articles. I also presented the project in **MakerFest'16**, Ahmedabad.

Camps/Hackathons

Aug 2015 **In50Hrs IoT Hackathon,**, *MediaTek, Bangalore*.
As the team lead of three, won fourth place for prototyping a pollution monitoring and prediction system for two wheelers.

May 2013 **Summer Course in Expt. Phy.**, *Tata Inst. of Fundamental Research, Mumbai*
Presented a talk entitled 'Quirky results with The Physical Pendulum: Instruments are to blame'

Aug 2012 **Sixth Asian Science Camp,** *Jerusalem, Israel*
Part of the Indian Delegation consisting of 30 students.

Internships

May 2014 – July 2014 **Summer Intern**, *Dept of Physics, Brandeis University*, Waltham, MA,
Guide:Prof. John F. C. Wardle.
Learnt to program monte carlo simulations in MATLAB. Found a novel formula for orientation of Quasars based on radio observations and simulation results. Presented a poster outlining the results at Brandeis Summer SciFest, 2014.

Technical skills

Programming Languages	C, C++, MATLAB ●●●●●	Software	Origin, Atmel Studio, LTSpice, Arduino ●●●●●
	Python, Processing ●●●○○		AutoDesk Inventor, LaTeX, Blender ●●○○○
Hands On	SMD soldering, Digital circuit debugging, Laser-Cutting, Woodshop ●●●●●		
	Analog circuit debugging, 3D printing, MetalShop ●●●○○		

Co-Curricular Activities

I am an avid maker and spend practically all of my free time in my workshop hacking electronics. I enjoy using overpowered technology to solve minor nuisances and creating seamless human machine interfaces. I am currently working on a set of projects attempting to imbue a sense of animacy to everyday objects. Details about my projects can be found at my instructables and hackaday pages.

Instructables www.instructables.com/member/tinkrmind/
HackaDay www.hackaday.io/tinkrmind

Feb 2014 As the engineering coordinator for Pravega – IISc's Science and cultural festival– I lead a team of 14 volunteers to organise engineering competitions.

2013, 2012 Built various high voltage demonstrations for IISc open day, including a 100KV VandeGraff generator and a macroscopic, analog of an electrostatic particle accelerator.

Nov 2012 Organized waste collection in the IISc campus and used the collected material to conduct 'Best out of Waste' workshops in various government schools for children's day through Notebook Drive, IISc.

References

Dr. Vishwesha Guttal
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