## Nakul Garg

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Information Peeragarhi e-mail id: nakulg.cstaff@iitd.ac.in

New Delhi, 110087 git: https://github.com/Nakul22

**INDIA** website: https://sites.google.com/view/nakulgarg/

Research Mobile Computing, Embedded Systems, Robotics, Image Processing, IOT, Visible Light

Interests Communication

I.P.U., New Delhi, India EDUCATION Jul. 2014-May 2018

B.Tech. in Electronics and Communication Engineering, 70%

S.M.S., New Delhi, India 12<sup>th</sup> C.B.S.E, *CBSE* 90% Jul. 2014 10<sup>th</sup> C.B.S.E. *CBSE 82%* 

Jul. 2012

Sept. 2018—Present

INTERNSHIPS AND Research Fellow IIT Delhi Industry

EXPERIENCE Advised by: Dr. Rijurekha Sen (IIT Delhi) and Dr. Siddharth Joshi (Notre Dame)

May. 2018—Sept. 2018 Technical Advisor

Celestini Project India, Marconi Society, Google, IIT Delhi

Led by: Dr. Aakanksha Chowdhery (Google AI) and Dr. Brejesh Lall (IIT Delhi)

Project Intern Jun. 2017—Sept. 2017

Celestini Project India, Marconi Society, Google, IIT Delhi

Led by:, Dr. Aakanksha Chowdhery (Google AI) and Dr. Brejesh Lall (IIT Delhi)

Technical Executive Aug. 2016—Jul. 2017

Prismart Productions, New Delhi

Trainee Aug. 2016—Sept. 2016

Internet of Things, Texas Instruments, India

Sept. 2015—May 2016 Trainee

Embedded Systems, IQB Solutions, Delhi

Research **PUBLICATIONS** AND PATENTS

- 1. N. Garg, I. Janveja, D. Malhotra, C. Chawla, P. Gupta, H. Bansal, A. Chowdhery, P. Mukherjee, and Brejesh Lall, "DRIZY- An IOT based Driver Assistance System," submitted to ACM/IEEE International Conference on Internet-of-Things Design and Implementation 2018.
- 2. N. Garg, I. Janveja, D. Malhotra, C. Chawla, P. Gupta, H. Bansal, A. Chowdhery, P. Mukherjee, and Brejesh Lall. "DRIZY—Collaborative Driver Assistance Over Wireless Networks," ACM MobiCom Poster, Utah, USA, 2017.
- 3. N. Garg, J.Parikh. "Wireless transceiver design for visible light communication," ICICI, India, 2017.
- 4. I. Janveja, N. Garg, C. Chawla, J.Parikh. "Aquacomm: Underwater Visible Light Communication," IndiaCom, India, 2018. (accepted)
- 5. N. Garg "Aerial Surveillance Quadcopter" 2016. Patented at Intellectual Property India.

Awards	<ul> <li>Outstanding Student Volunteer Award by IEEE Delhi Section.</li> <li>First position at EV Hackathon, India - Australia joint initiative.</li> <li>Winner of World Food India Hackathon. Awarded by President of India.</li> <li>Winner of Celstini Project India 2017,IIT Delhi Marconi Society. Sponse Google.(URL: www.celestiniprojectindia.com)</li> <li>Travel grants: NSF for Mobicom 2017, ACM SIGMOBILE</li> <li>All India 1<sup>st</sup> in eYantra Robotics Competition, IIT Bombay</li> <li>All India 2<sup>nd</sup> in eYantra Robotics Competition, IIT Bombay</li> <li>Ranked 44 in IEEE XTreme Hackathon</li> <li>1<sup>st</sup> in Robotron TechMarathon, DDUC, Delhi University</li> <li>Among top 6 in National CBSE Science Exhibition</li> <li>4<sup>th</sup> in International Quanta, CMS School, Lucknow</li> <li>1<sup>st</sup> in Regional level CBSE Science Exhibition</li> <li>1<sup>st</sup> in Annual School Science Exhibition</li> <li>1<sup>st</sup> in Annual School Science Exhibition</li> <li>2<sup>nd</sup> in Annual School Science Exhibition</li> </ul>	
Leadership Experience	<ul> <li>Led a team of 200 students to organize the biggest technical hackathon in India.</li> <li>Chair of BVP IEEE Student Branch         <ul> <li>Vice—Chair of Robotics Society, BVCOE</li> <li>Head Event—Manager, Fervour - Technical Fest of college.</li> </ul> </li> <li>Conducted more than 80 workshops accross India to teach programming coon Arduino/Raspberry, Image Processing and Project Management.</li> <li>Conducted seminars on STEM Education in Delhi schools.</li> </ul>	2018 Present 5 - 2017 2017
TECHNICAL PROJECTS	<ul> <li>"Near Sensor ML" Leveraging convolution of CNN in analog domain.</li> <li>"PlugFree" Autonomous charging of Drones. (Sponsored by GSU, USA)</li> <li>"Augur" Long-Range V2V Communication with Smartphone Camera</li> <li>"DRIZY" Collaborative Driver Assistance Over Wireless Networks</li> <li>Li-Fi (Data transfer through light) Demonstration</li> <li>"PUSHPAK" Aerial Surveillance Quadcopter with Rover</li> <li>Touch—Screen Based Home Automation</li> <li>IOT based Temperature Logger with Remote Access</li> <li>FireBird V Robot – Mars Rover Navigation and 3D Modelling</li> <li>Raspberry pi-3 based Personal Cloud Storage</li> <li>Anti Car Theft System with SMS alert application</li> <li>Zig—Bee based Swarm Robotics</li> <li>Automatic Rubiks Cube Solver</li> <li>Wireless Odometer</li> </ul>	2018 2018 2018 2017 2017 2016 2016 2016 2016 2015 2014 2014 2014 2012

- TECHNICAL SKILLS  $\mathbf{C}/\mathbf{C}++$ ,  $\mathbf{Python}$ , Matlab, Embedded C
  - $\bullet$  Deep Learning, Computer Vision, Image Processing
  - Raspberry Pi, Arduino, 8051, Atmel-AVR, Texas-MPU
  - Pixihaux, APM 2.6/8, KK2 Flight Controllers