

# Nithin Rao

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EDUCATION	<b>B.Tech in Electronics and Communication Engineering</b> 2012 - 2016 <a href="#">National Institute of Technology Karnataka, Surathkal, India</a> - CGPA of 7.59/10 <b>Intermediate - Sri Chaithanya Educational Institutions, Hyderabad</b> - 97% 2010 - 2012 <b>Secondary School - Teja High School, Bhupalpally</b> - 92.33% 2000 - 2010
PUBLICATIONS	• <b>Nithin Rao K</b> , G Nisha Meenakshi, Prasanta Kumar Ghosh, "Spectrogram enhancement using multiple window Savitzky Golay (MWSG) filter for robust bird sound detection", IEEE/ACM Transactions on Audio, Speech, and Language Processing, May 2017. <a href="#">view here</a>
EXPERIENCE	<b>Project Assistant at SPIRE LAB IISc</b> , Bangalore Jan 17, 2018 - Currently Working on a project to detect ALS and Parkinson's disease by analyzing the speech of patients.  <b>Software Developer at Robert Bosch Engineering and Business Solutions</b> , Bangalore July 07, 2016 - Jan 16, 2018 Worked on Customer and Production diagnosis in Telematics Projects, where implemented new features and also ported new project in the existing module for <a href="#">Daimler</a> using software language C++  <b>Summer Research Intern in Spire Lab , Spire Lab, IISc</b> <i>Mentored by Dr. Prasanta Kumar Ghosh, Dept. of Electrical Engineering, IISc Bangalore</i> May, 2016 - July, 2016 Developed an UnSupervised System for robust bird sound detection using enhanced Multiple Window Savitzky-Golay (MWSG) spectrogram. Proposed method, on average, achieved higher F-score (10.24% relative) compared to the best of the baseline schemes.  <b>Winter Research Intern in Spire Lab , Spire Lab, IISc</b> <i>Mentored by Dr. Prasanta Kumar Ghosh, Dept. of Electrical Engineering, IISc Bangalore</i> Dec, 2016 Worked on a project, "Converting whispered speech to normal speech using CELP Codec" to include Pitch for the whispered signal as it lacks Pitch & Synthesize speech to produce normal human speech like signal from Whispered Speech and designed an Android Application for the same  <b>Summer Research Intern in Digital Signal Processing Lab, School of Electrical Sciences</b> <i>Mentored by Prof. Ganapathi Panda, School of Electrical Sciences, IIT Bhubaneswar</i> May, 2014 - June, 2014 Developed algorithms to recognize Oriya Numerals using Radial Basis Function Neural Network whose features are extracted from Curvelet Transformed numeral which is further processed for dimensionality reduction using Principal component analysis (PCA) achieved an 97.92% accuracy.  <b>VLSI Design Contest in, Synopsys Hyderabad</b> July, 2015 Participated in Synopsys Design Contest Program, where we were trained on Synopsys EDA Custom Designer Tool and Implemented "Basic Latched Comparator"
TECHNICAL SKILLS	<b>Strongest Areas</b> - Audio Speech and Image Processing, Linear Algebra <b>Languages</b> - Python, C++, C, Java <b>Tools</b> - MatLab, Qt, Processing, Eclipse, Android Studio, Jupyter, Anaconda, Git, JIRA , Vector Canoe
SELECTED PROJECTS	• <b>Decision level data fusion of Image and Speech recognition system</b> : Major Project on, Detecting an object in an area based on the command given through speech using MFCC and HMM for Speech & HOG and SVM for Image as Features and classifier respectively under the guidance of <a href="#">Prof. Ashvini Chaturvedi</a> . • <b>Controlling a switch</b> - Controlling a switch through DTMF codes of Mobile Keypad modulated by FSK. • <b>Line follower Robot</b> : Designed a line follower robot without using microcontroller during Engineer-13. • <b>Catch the LED-game</b> : Written VHDL code for the game on XILINX Software. • <b>2-1 Quiz buzzer circuit</b> : Built a 2-1 quiz buzzer circuit using 555 Timer.

ONLINE COURSE CERTIFICATES	<ul style="list-style-type: none"> <li>Completed “Image and video processing: From Mars to Hollywood with a stop at the hospital” <a href="#">course</a> with distinction offered by Duke University which was taught by <a href="#">Prof. Guillermo Sapiro</a></li> </ul>
RELEVANT COURSES	Digital Signal Processing, Number Theory, Advanced Digital Signal Processing, Adaptive Signal Processing, Applications of Signal Processing on Image and Video, Digital Signal Processing Architecture
ACHIEVEMENTS AND AWARDS	<ul style="list-style-type: none"> <li>Head of Gadget SIG and Executive Member of <a href="#">Institution of Engineers (IE)</a>, NITK Chapter during 2015-2016.</li> <li>Secured AIR of 2124 in <a href="#">All India Engineering Entrance Examination(AIEEE)</a> conducted by CBSE in 2012.</li> <li>Co-Founder of <a href="#">CUARTOWAVE</a>, a non-profit Organization.</li> <li>Creator of Twitter Bot <a href="#">CricketBot</a>, for Latest updates on Cricket.</li> <li>Member of U-16 WARANGAL District Cricket Champion team of the Year 2009,Member of College Cricket Team, Represented NITK in a Chess meet held at Puttur.</li> <li>Volunteered to be a part of the organizing committee to hold <a href="#">The Pinkerton Lecture</a> by IET India at Infosys, Bangalore on 5 th Dec’13.</li> </ul>
HOBBIES	<a href="#">Games and Artistic Images in Processing</a> ,Tech Follower,Playing and Watching Cricket
MORE	Find all other things I do and work on at <a href="#">nithinraok.github.io/</a>
REFERENCES	<ul style="list-style-type: none"> <li> <b><a href="#">Prasanta Kumar Ghosh</a></b>  Assistant Professor,  Department of Electrical Engineering (EE),  Indian Institute of Science (IISc),  Bangalore, Karnataka, 560012  e-mail: <a href="mailto:prasantg@ee.iisc.ernet.in">prasantg@ee.iisc.ernet.in</a> </li> <li> <b><a href="#">Pathipati Srihari</a></b>  Assistant Professor,  Department of Electronics and Communication Engineering (EC),  National Institute of Technology Karnataka(NITK),  Surathkal,Karnataka, 575025  e-mail: <a href="mailto:srihari@nitk.ac.in">srihari@nitk.ac.in</a> </li> <li> <b><a href="#">Preethi Rama</a></b>  Project Manager ,  Multimedia Department,  Robert Bosch Engineering and Business Solutions Ltd,  Bangalore,Karnataka, 560095  e-mail: <a href="mailto:preethi.r@in.bosch.com">preethi.r@in.bosch.com</a> </li> </ul>