Prathamesh Vaste

Electrical Engineer

Address
7903 E Santa Cruz Ave
Orange, CA 92869

Phone & Skype
(619)704-6396
prathameshvaste

Mail
prathamesh.vaste@ yahoo.com

LinkedIn
linkedin.com/in/
prathameshvaste

Programming
MATLAB ★★★★★
C/C++ ★★★★☆
Python ★★★★☆
Verilog ★★★☆☆
LabVIEW ★★★☆☆

Hardware
TI TMS320,
Raspberry Pi,
Arduino

Instruments
Spectrum Analyser,
Vector Analyser,
Oscilloscope,
Multimeter

Skillset
DSP Algorithms,
Audio Processing,
Filter Design,
Analysis and
Synthesis,
Communication
Systems,
Modelling,
LaTeX

Areas of Interest
DSP Algorithms,
Audio Processing,
Communication
Systems.

Academically proficient Signal Processing enthusiast with Audio DSP and Communication background, research experience and strong programming skills recognized for diligence.

Experience

Aug 16 - Now	**DSP Engineer**	Extron Electronics

• Developing signal processing algorithms for the Extron ProDSP Processors.
• Developing test algorithms for HRTF and room impulse response.

Education

Aug 2016	**Master in Electrical Engineering**	San Diego State University

GPA 3.75 / 4.0
Courses- Modem Design, Adaptive Algorithms, Speech Processing
Wireless Sensor Networks,Multirate Signal Processsing,
Digital Signal Processing,Stochastic Signals and Systems.

May 2014	**Bachelor in Electronics Engineering**	University of Pune, India

GPA 3.8 / 4.0
Courses - Digital Communication, VLSI, Computer Networks,
Microcontroller and Application,Network Analysis and Filter Design.

Thesis

Application of Basis Functions in Source Separation
Chair: Dr. fredric j harris
• Studied various source separation algorithms like Independent Component Analysis (ICA), Degenerate Unmixing Estimation Technique(DUET),etc.
• Analysed waveforms of musical instruments to find out their underlying basis function
• Synthesized Basis Functions for instruments using Empirical Mode Decomposition for source separation

Projects

Sept 2015	**Adaptive Hopping Tone Canceller**

• Designed an algorithm to adaptively cancel a hopping sinusoid using Least Mean Square Algorithm.

March 2015	**4 bit Sigma - Delta Modulator**

• Studied and Designed a 4 bit Sigma Delta Modulator with dynamic range of 96 dB by shaping the noise filter using a predictor filter.

March 2015	**Note Separation from single instrument track**

• Designed an algorithm to detect each note and extract it from a single instrument track by detecting the onsets and velocities of each note.
• Separation was performed using Complex Spectral Elimination.

May 2014	**Design and Development of Active Noise Silencer**

• Worked on a prototype design for Active Noise Silencer on TI's DSP TMS320 for noise reduction in ventilation ducts.
• Implemented noise cancellation algorithms such as LMS & Hilbert Transform.