

Nagarjun Chakilam

Audio & DSP Quality Engineer

24 Lake View Gardens, Apt 601
Natick, MA 01760 USA
chnarjun@gmail.com
+1 (215) 200-4755

Summary

- 6+ years experience in signal processing software industry using MATLAB and Simulink.
- 5+ years experience in testing streaming / real-time signal and audio processing algorithms applying object oriented principles.
- Experience in developing tools to automate processes and save engineers time.
- Experience using version control systems like Git and Perforce.
- Strong fundamentals in digital signal processing concepts and advanced MATLAB programming.
- Excellent communications skills, time management skills and a well-versed team player.
- Passionate about signal processing applications especially in audio.
- Hobbies include iOS app development, audio plugin development for DAWs and Raspberry Pi programming using Swift, C++ and Python respectively.

Experience

The MathWorks, Inc.

NATICK, MA

Audio & DSP Quality Engineer *Audio System Toolbox™*

Feb '12 – Present

- Developed audio and signal processing algorithms using MATLAB object oriented principles as baseline to lock down the functionality of the shipping components.
- Developed automated test suites for complex software audio and signal processing components using MATLAB and Simulink.
- Took initiative in enhancing team wide processes that increased our team's productivity in multiple stages of the software development cycle.
- Gathered requirements, presented software designs, developed and tested easy to use tools and saved engineers time in developing a feature and writing automated tests in MATLAB.
- Mentored several engineers and interns in the team to test audio processing algorithms and other audio related features in the product.
- Actively participated in multiple book clubs and proactively searched for opportunities to implement what I learned.

Signal Processing Engineer Intern *Phased Array System Toolbox™*

Aug '11 – Jan '12

- Documented and presented software designs for review.
- Developed functions for the Phased Array System Toolbox product in MATLAB.
- Addressed several software related bugs and enhancements.
- Updated the product code base to a new infrastructure that makes it easier to localize and internationalize the software in different languages.

Villanova University

VILLANOVA, PA

Research Assistant

Dec '09 – July '11

- Developed watermarking algorithm in MATLAB to detect sonar signals in underwater acoustic channels.
- Estimated underwater channel using least squares estimation algorithm in MATLAB.
- Tested the watermarking algorithm in the estimated underwater channel and examined ROC curves.
- Detected the watermarked sonar signal in the actual sea trials at the South Florida Ocean Measurement Facility.

Education

Villanova University

VILLANOVA, PA

Masters in Electrical Engineering GPA: 3.97/4.0

2009 – 2011

CVR College of Engineering

HYDERABAD, INDIA

Bachelors in Electronics & Communications Engineering GPA: 3.92/4.0

2005 – 2009

Skills

Programming languages: MATLAB, C, C++, Python, Swift, JAVA.

Operating systems: MAC, UNIX, WINDOWS.

Tools: Simulink, Perforce, Git, L^AT_EX, Xcode.

Publications

Mobasserri, B.G.; Lynch R.S.; Chakilam, N.; "Watermarking sonar waveforms using knowledge of channel coherence " *OCEANS 2010*, pp 1-8, 20-23 Sept. 2010.

Mobasserri, B.G.; Chakilam, N.; Lynch R.S.; "Sonar Watermark Embedding and Detection: A Sea Trial Report " *2012 SPIE Defense, Security and Sensing, Baltimore, MD*.