ANEESH VARTAKAVI

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OBJECTIVE

Seeking a fulltime position in the areas of Digital Signal Processing, Audio Content Analysis, Spatial Audio, Psychoacoustics and Physical Computing.

TECHNICAL SKILLS

Programming Languages	: C++/C, Python, Java
Technical Computing	: MATLAB
Graphic and Visual Design	: Max/MSP, Processing
Web Development	: HTML, JavaScript, PHP
Microcontroller Platforms	: Arduino

EXPERIENCE

thinkplay audio
Developer (Summer, 2013)
Worked with the JUCE framework in C++ to develop Audio and MIDI processing functionality for the thinkplay application.

EarSketch – API Team (Jan 2013 – May 2013)
The project is a tool to generate interest in computing through computational music remixing.

Indian Institute of Science
Student Intern, Co-op (Jan – May, 2012)
Worked on Compressed Sensing algorithms in Matlab, and their application to images and Optical Coherence Tomography data.

EDUCATION

Georgia Institute of Technology
Master of Science (Aug 2012 – **May 2014**)
Music Technology
CGPA: 4/4

Manipal Institute of Technology, India
Bachelor of Engineering (2008 --- 2012)
Electronics and Communication

PROJECTS

fLoop (Nov 2013)
A GPL licensed standalone application for audio file retrieval by rhythmic and timbral similarity, built in C++.

geneSynth (April 2013)
geneSynth is an exploration into multi-agent control, algorithmic composition, genetic algorithms and interactivity in music.

Grainita (Feb 2013)

Grainita is a new musical instrument for novices, drawing inspirations from sand art, ambient music and stochastic composition. It attempts to study new forms of interaction for music, combined audio-visual art paradigms, computer vision and machine improvisation through algorithmic composition.

Speaker Identification in Reverberant Environments (April 2013)
This project was an exploration into Computational Auditory Scene Analysis (CASA), Blind Source Separation (BSS), Multi-Resolution Analysis, Speaker Identification, Neural Networks and Speech Synthesis.

Brainwave Entrainment and Verbal Recall (Dec 2012)
The project investigated the effects of Binaural Beats on verbal recall scores through subjective experiments and statistical analysis.

Find-a-gig (Sep 2012)
Find-a-gig is a musical event recommendation system which uses user location for distance based results with the LastFM and Google Maps APIs.

Binaural Spatial Audio (June - July 2010)
The project aimed to generate Binaural Spatial Audio using Head Related Transfer Functions (HRTF), and create a multi-channel mix of spatial audio through a GUI in Matlab.

HRTF's and Reverberation (Sep 2011 – Nov 2011)
The project explored the effects of Reverberation and HRTF's in human spatial audio perception. It culminated in the simulation of a Binaural Room Impulse Response (BRIR) of an idealized room.

COURSES

Georgia Tech
Audio Software Engineering (Current)
Applications of DSP (Current)
Computational Music Analysis
Audio Engineering
Musical Acoustics
Digital Signal Processing for Music
Interactive Music
Principles of Interactive Design
Music Perception and Cognition

Manipal Institute of Technology
Advanced Digital Signal Processing
Digital Speech Processing
Wavelets
Microprocessors and Microcontrollers