Sahil Sapre
Email: ssapre@ece.cmu.edu
Web: www.ece.cmu.edu/~ssapre/ www.contrib.andrew.cmu.edu/~ssapre

EDUCATION

Carnegie Mellon University, Pittsburgh, PA (Dec 2011)
Master of Science, Electrical and Computer Engineering
CGPA: 3.88/4.0

University of Pune, Pune, India (Aug 2010)
Bachelor of Engineering, Electronics and Telecommunication Engineering
CGPA: 3.61/4.0

WORK EXPERIENCE

- **NVIDIA**, Santa Clara, CA (Summer 2011)
  Software Engineering Intern: Worked on 'faking' custom DisplayPort 1.2 topologies to the GPU, transparent to the entire software stack. The tool will be used in regression testing and as a sanity check for the DisplayPort 1.2 library. A second project involved parsing DisplayPort 1.2 AUX channel log messages obtained from an AUX analyzer.

ACADEMIC WORK EXPERIENCE

- ***Teaching Assistant,*** 18-349: Embedded Real-Time Systems, Carnegie Mellon University (Fall 2011) ***Instructor***: Prof. Prof. Priya Narasimhan
- ***Masters Research Student***, Real-Time and Multimedia Systems Laboratory, Carnegie Mellon University (Spring 2011) ***Advisor***: Prof. Raj Rajkumar
- **Grader,** 21-441: Number Theory, Department of Mathematical Sciences, Carnegie Mellon University (Fall 2010) ***Instructor***: Prof. Richard Statman

HONOR SOCIETIES/ACTIVITIES

- ***Invited Member***, Eta Kappa Nu – Sigma Chapter, Carnegie Mellon University
- ***Event Chair – Masters Advisory Council***, Department of Electrical and Computer Engineering, Carnegie Mellon University (2010-2011)
- ***Member***, **Students' Council**, Pune Institute of Computer Technology, India (2009-2010)

SOFTWARE SKILLS

C, C++, Assembly (ARM, x86)

PROJECTS

- **Real-Time Android Kernel**: Added resource management and admission control schemes to the Android kernel that provides timely, guaranteed and protected access to system resources. Also enhanced the Android kernel to implement power management schemes, SysClock and PM-Clock (Fall 2011)

- **Gravel**: A shared memory, fully pre-emptive, real-time operating system kernel for an ARM processor. It includes a system call handler, an interrupt handler, a timer driver, and a process management unit. (Fall 2010)

- **Tracking on DSPcam's:** Tracking of objects across a distributed smart camera network on-board on cameras running embedded Linux. (Spring 2011)

- **Privacy Cam:** Masking personally identifiable details like faces and vehicle numbers on-board on a smart camera running embedded Linux. (Spring 2011)

- **Smart Gestures:** A framework to enable front-camera equipped computers to respond to iPhone-like pinch and zoom gestures without the use of a touch screen. (Fall 2009, Spring 2010)

- **De-identification of Speech**: Use of voice transformations to disguise speakers' identities while preserving intelligibility of speech, using Gaussian Mixture Models, Mel-Frequency Cepstral Coefficients and fundamental frequencies of voice. (Fall 2010) ***Advisor***: Prof. Alan W. Black

- **Texture Classification**: Classification of materials based on their textured appearance using a single photograph captured under unknown viewpoint and illumination conditions. (Fall 2010)